



Commonwealth of Massachusetts – 2014

Human Resources Division

# Physician's Guide

Initial-Hire Medical Standards

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## I. INTRODUCTION

This Guide provides examining physicians with Massachusetts Human Resource Division's (MA-HRD) medical standards for initial-hire evaluation of applicants for municipal police and fire fighter positions. The Guide also provides reference material to assist the physician in the form of:

- ☐ Essential Job Functions for both police and fire fighters,
- ☐ Linkage of MA-HRD police and fire fighter Physical Abilities Test events to essential job tasks,
- ☐ Physical Fitness Standards Test Course for Police Officers/Physical Ability Test
- ☐ Physical Fitness Standards Test Course for Fire Fighters/Physical Ability Test

Please be advised that the enclosed medical standards are updated and effective as of **December 1, 2014**.

The purpose of the standard Medical Examination Form is to obtain a medical history from the examinee, to record your medical examination and test results, and to report on the results of your medical determination. A new page has been added with the current revision. The additional page (page 7) is to be used to report any Category B conditions that are not disqualifying at the time of the initial-hire examination, but that are known to have a progressive course that may, at some time in the future, have an adverse effect on a police officer or fire fighter's ability to safely and effectively perform essential job functions.

All medical examination records are the property of the appointing authority. They must be kept accessible for the duration of the examining physician's contract in the event of an audit, appeal or disability proceeding. If the contract terminates or expires, the physician will be instructed to transfer these records to his or her successor. The physician may, however, retain copies of the examination reports.

Before you conduct a medical examination, please familiarize yourself with the essential functions, including the physical demands, of the job. You should also review the Medical Standards for the appropriate job. Finally, please conduct a thorough medical examination as prescribed by these Medical Standards. When you have completed the medical examination, you will be required to certify in the Medical Verification Section (Page 6, Section I) of the Medical Examination Form whether or not the examinee passed the medical exam. The appointing authority will notify the examinee of the results of the exam and will forward pages one and six of the Medical Examination Form to HRD.

## **II. GENERAL INFORMATION**

A physician approved by the community for which the examinee seeks to work must sign off medical examinations and any subsequent re-examinations.

Municipal physicians are responsible for reviewing the results of the examination and advising the department whether or not an examinee has passed the medical examination under the applicable medical standards.

Information and records concerning an examinee's medical examination must be kept confidential and in conformance with medical records requirements.

Any community that concludes that a physician has conducted an incomplete or less than thorough medical examination is required to notify HRD, and return the results of the exam to the physician with an explanation of the reasons why. The physician is then required to review the community's concerns and respond to those concerns in a thorough and complete manner.

An examinee who fails the medical examination is permitted one re-examination under the Initial Medical Standards Program. The subsequent re-examination should focus on the standards not met by the candidate in the initial examination and should entail a specialist examination. However, should the candidate's failure in the initial examination involve procedural issues (e.g. a laboratory or diagnostic test not completed or not completed properly by the candidate), the subsequent re-examination must address the procedural issues in question, which may or may not necessitate a specialist exam. In either case, the outcome of the subsequent re-examination will take precedence over the outcome of the initial examination in determining whether a candidate meets the initial-hire medical standards.

The Medical Examination Form is subject to audit by HRD. HRD has the right to obtain copies of documentation of medical examinations from examining physicians for review by HRD's medical consultants. This audit is to assess the quality and uniformity of examinations, to ensure compliance with consistent application of HRD's medical protocol for conducting medical examinations, and to provide information needed to improve and update the examination process and forms. All deficiencies in examinations performed will be discussed with examining physicians. By signing page one of the Medical Examination Form, the candidate grants HRD access to his or her medical examination records. Pages one and six of the Medical Examination Form must be sent to HRD by the appointing authority.

Unless there is a prior agreement between the candidate and the community in terms of who will be responsible for the expenses incurred in the examination process, the candidate is responsible for paying the expenses. Before administering the medical examination process, the examining physician should therefore advise the examinee of the costs associated with the process, especially if a specialist exam and/or additional testing are involved.

Any questions examining physicians have for the Massachusetts Human Resources Division should be directed to the Medical and Physical Fitness Standards Team at 617-727-3777.

### III. THE MEDICAL EXAMINATION PROCESS

The referring department will have completed Section A of the Medical Examination Form and will have given the Medical Examination Form to the examinee to complete Section C (Consent and Certification) and Section E (Medical History) before reporting to your office for the examination. If these sections are not completed, please have the examinee complete them. Carefully review the medical history with the examinee and record in detail in Section H (Additional Notes) any additional information you obtain. **Please note that the examinee is now asked whether he/she is currently receiving any disability benefits.** There should be sufficient data recorded regarding any positive medical history to justify the fitness determination you make.

Each examinee must receive a comprehensive medical examination, which must include all systems necessary to ensure that he or she meets the applicable Medical Standards. The basic medical examination should be inclusive of, but not limited to all items listed in Section F (Medical Examination) of the Medical Examination Form. You should also examine other areas, as indicated based upon the medical history, even if they are not listed in Section F. Please elaborate on any positive medical findings in sufficient detail to justify your determination of whether the candidate passes the criterion or not. Examination of the breasts, rectum or prostate should be included only when they are clinically indicated in your judgment, based upon the history provided by the examinee. Otherwise, these examinations should be offered to examinees for their own wellness and performed if the examinee consents. Providers are strongly encouraged to provide education on glaucoma. A nurse practitioner registered to practice in an expanded role by the Massachusetts Board of Registration in Nursing, or a physician's assistant registered to practice under a physician's supervision by the Massachusetts Board of Registration in Medicine may perform the medical examination. The final review and determination of whether the candidate passes the examination must be by an MD or DO physician licensed in Massachusetts.

HRD requires that each examinee receive the following tests: pure-tone audiogram, visual acuity, color vision, peripheral vision screening, spirometry with at least determination of FEV<sub>1</sub> and FEV<sub>1</sub>/FVC, and a screening test for tuberculosis. Space is provided on the Medical Examination Form for any additional laboratory and diagnostic tests that may be requested by the appointing authority. Testing for the presence of illicit or controlled drugs may be required by the appointing authority. HIV testing is not indicated for routine pre-placement screening. It is important that any additional tests that are required by the municipality be specified prior to the start of the medical examination.

When you have completed your examination, you may determine that additional information such as hospital records, specialized tests (e.g., an exercise tolerance test) or an examination by a medical specialist are needed to make a determination regarding whether or not an examinee meets the Medical Standards. Please advise and provide the candidate with specific guidance regarding the type of information needed and acceptable sources where it can be obtained. In the case of specialist opinions, the examinee should be advised to consult a specialist who is Board Certified in the appropriate specialty by a specialty board recognized by the American Board of Medical Specialists.

When the medical history has been reviewed, the medical examination has been performed, all laboratory and diagnostic test results have been reviewed and any necessary additional information obtained and assessed, the municipal physician should complete Section I (Medical Verification Section). This part may **not** be completed by a nurse practitioner or a physician's assistant. The determination of passage or failure of the exam should be based upon the ability of the examinee to meet the requirements of the applicable Medical Standards at the time of the medical examination.

Medical conditions listed in the Medical Standards are classified as "Category A" or "Category B" conditions. Category A conditions are considered absolutely disqualifying. For Category B conditions you are required to

consider whether the particular examinee's condition would prevent him or her from safely and effectively performing the essential functions of the position. Both the Medical Standards and the Essential Functions are found in this Physician's Guide (pgs. 5-31 and 32-43, respectively). If you find an examinee not qualified, you will need to indicate whether the condition is Category A or Category B and cite the applicable section of the Medical Standards in the Medical Verification Section. The examining physician must carefully document the rationale for finding the examinee not qualified.

If you find that an examinee failed to provide a complete and accurate medical history, you will need to explain such under Section I of the Medical Examination Form, "Physician's Notice of Examinee's Failure to Provide Complete & Accurate Medical History." By itself, failure to provide a complete and accurate medical history will not necessarily disqualify the examinee from meeting the medical standards, but may subject the examinee to administrative disqualification of employment or other adverse action by the appointing authority.

If an examinee is found qualified despite a potentially disqualifying condition, the logic behind this determination should be documented in Section H (Additional Notes) of the Medical Examination Form.

When an examinee is found to be in need of further evaluation or treatment, the municipal physician may refer the person to local clinics, hospitals or specialists. Except in the case of a bona fide emergency when a delay in treatment might prove harmful, the municipal physician should offer to provide a list of several sources and leave the selection of a specific provider up to the examinee.

#### **IV. Medical Standards for Municipal Police Officers**

(1) Medical Evaluation: Each municipal police department shall establish and implement a pre-placement medical evaluation process for candidates. During the medical evaluation, the physician shall evaluate each individual to ascertain the presence of any medical conditions listed in these standards, or any medical conditions not listed which would prevent the individual from performing the essential job functions without posing significant risk to the safety and health of him/herself or others. It is our intent to encourage the use of professional judgment regarding medical conditions that are not specifically listed.

The examining physician shall not certify as having met the medical requirements of these standards any candidate who is determined to have a Category A condition.

The examining physician shall not certify as having met the medical requirements of these standards any candidate who is determined to have a Category B condition that is of sufficient severity, either from the condition or the treatment, to prevent the candidate from performing the essential functions of a police officer without posing a significant risk to the safety and health of him/herself or others.

(2) The medical evaluation shall minimally include the following:

- ☐ a comprehensive medical history in addition to the medical history check-off list completed as Section E of the MA-HRD Medical Examination Form, to include significant past exposures, including, but not limited to, noise, blasts (concussive forces), indoor shooting range (lead), and any prior injuries, with particular attention to head injuries, any hospitalizations and surgeries and any medications used on a regular basis or repeatedly for any perceived medical condition (e.g.: over-the-counter allergy medications or over-the-counter pain medications).
- ☐ (b) height and weight
- ☐ (c) vital signs: pulse, respiration, blood pressure, and, if indicated, temperature
- ☐ (d) dermatological system
- ☐ (e) ears, eyes, nose, mouth, throat
- ☐ (f) cardiovascular system
- ☐ (g) respiratory system
- ☐ (h) gastrointestinal system
- ☐ (i) genitourinary system
- ☐ (j) endocrine and metabolic systems
- ☐ (k) musculoskeletal system
- ☐ (l) neurological system
- ☐ (m) basic mental status evaluation to include, at a minimum, the following:
  - ☐ general appearance (e.g.: kempt, disheveled),
  - ☐ affect,
  - ☐ state of alertness,
  - ☐ orientation to place, person and time,
  - ☐ comprehensibility in expression,
  - ☐ insight,
  - ☐ coherence of thought processes.

The initial examiner is encouraged to refer any applicant found to have an apparent abnormality in mental status evaluation to a doctoral level mental health professional (psychologist or psychiatrist) for further evaluation. Current or recent use of psychotropic medications shall be reviewed by a board-certified psychiatrist. Candidates with current or past psychiatric diagnoses in the domains noted in Section IV.(6)(o) must be referred to a board-certified psychiatrist, preferably one with experience evaluating individuals for safety-sensitive job positions, for final determination of appropriateness to function as a police officer or fire fighter.

- ☐ (n) audiometry. Audiograms should be performed in a sound-treated booth compliant with the most recent version of ANSI S3.1 (Criteria for permissible ambient noise during audiometric testing) with equipment calibrated to the most recent version of ANSI standard S3.6 (Specification for Audiometers). If a booth is unavailable, the test room sound pressure levels should not exceed those specified in the Federal OSHA "Audiometric test rooms" standard (29 CFR 1910.95, Appendix D).
- ☐ (o) visual acuity, color vision and peripheral vision testing.
- ☐ (p) pulmonary function screening . Screening pulmonary function evaluation shall consist of spirometry with no use of short acting bronchodilator agents for 8 hours prior to testing. Testing should be performed in accordance with the most recent version of the American Thoracic Society "Standardization of Lung Function Testing." Screening spirometry should be administered by an individual both trained in the use of the spirometry instruments and experienced in performing the examinations.
- ☐ (q) a review of hepatitis B immunization status.
- ☐ (r) a Purified Protein Derivative (PPD) test or interferon-gamma release assay (IGRA) for tuberculosis, and
- ☐ (s) other diagnostic testing where indicated.

(3) The medical evaluation process may also include:

- ☐ (a) a review of tetanus immunization status.

(4) All medical information collected as part of a medical evaluation shall be considered confidential medical information, and shall be released by the physician only with the specific written consent of the candidate. The physician shall report the results of the medical evaluation to the candidate, including any medical condition(s) disclosed during the medical evaluation and the recommendation whether the candidate is medically certified to perform as a police officer. The physician shall inform the police department and HRD only whether or not the candidate is medically certified to perform as a police officer. The specific written consent of the candidate shall be required to release confidential medical information to the police department and HRD, following guidelines set forth under the Americans With Disabilities Act (ADA) and other relevant policies.

(5) Category A and Category B Medical Conditions

- ☐ (a) A Category A Medical Condition is a medical condition that would preclude an individual from performing the essential job functions of a municipal police officer, or present a significant risk to the safety and health of that individual or others.
- ☐ (b) A Category B Medical Condition is a medical condition that, based on its severity or degree, may or may not preclude an individual from performing the essential job functions of a municipal police officer, or present a significant risk to the safety and health of that individual or others.



(6) The following biological systems shall be components of the Initial Medical Standards for police officers:

(a) Musculoskeletal

1. Head and Skull

- a. Category A medical conditions shall include:
  - i. uncorrected decompression craniectomy with residual defect larger than 1 square inch.
- b. Category B medical conditions shall include:
  - i. deformities of the skull, loss or congenital absence of the bony substance of the skull which limit the ability to wear a mask and/or protective breathing apparatus,
  - ii. thoracic outlet syndrome sufficient to compromise required activity,
  - iii. congenital cysts, chronic draining fistulas, or similar lesions,
  - iv. any other head condition that results in an individual not being able to safely and effectively perform the job of police officer.

2. Neck and Cervical Spine

- a. Category A medical conditions shall include:
  - i. none.
- b. Category B medical conditions shall include:
  - i. cervical arthrodesis/fusion,/instability,
  - ii. cervical canal stenosis,
  - iii. cervical radiculopathy or myelopathy,
  - iv. herniated disc,
  - v. degenerative disc disease,
  - vi. abnormal chronic contraction of neck muscles,
  - vii. decompression laminectomy,
  - viii. any other neck condition that results in an individual not being able to safely and effectively perform the job of police officer.

3. Thoracic/lumbar/sacral Spine

- a. Category A medical conditions shall include:
  - i. symptomatic spondylolisthesis, whether or not surgically corrected.
- b. Category B medical conditions shall include:
  - i. lumbar laminectomy or discectomy, with or without fusion,
  - ii. degenerative disease/spondylolysis/pars defect
  - iii. structural abnormality, fracture, or dislocation,
  - iv. degenerative disk disease,
  - v. herniated disk/sciatica/radiculopathy,
  - vi. spinal stenosis,
  - vii. spinal surgery not covered in Category A,
  - viii. any other spinal condition that results in an individual not being able to safely and effectively perform the job of police officer.

4. Extremities

- a. Category A medical conditions shall include:
  - i. hemipelvectomy,
  - ii. hip disarticulation,
  - iii. above-the-knee amputation,
  - iv. lack of either hand,
  - v. lack of either thumb proximal to the nail cuticle.
- b. Category B medical conditions shall include:
  - i. severe limitation of motion of a joint, fibrosis, or arthrodesis,
  - ii. amputations not covered in Category A:
    - a. whole or partial digit amputation other than the thumb,
    - b. amputation of multiple digits,
    - c. partial foot amputations including multiple toes on the same foot,
    - d. transtibial amputation,
    - e. any other amputation not covered in Category A.
  - iii. total joint arthroplasty:
    - i. shoulder,
    - ii. elbow,
    - iii. wrist,
    - iv. thumb, first, or second digit,
    - v. hip,
    - vi. knee,
    - vii. ankle,
  - iv. deformity or dislocation of a joint or limb,
  - v. joint reconstruction, ligamentous instability, or joint replacement not covered in (iii),
  - vi. chronic osteoarthritis or traumatic arthritis,
  - vii. inflammatory arthritis,
  - viii. osteomyelitis,
  - ix. compressive neuropathies including carpal tunnel syndrome or ulnar nerve palsy,
  - x. required use of stabilizing orthopedic braces,
  - xi. any other extremity condition that results in an individual not being able to safely and effectively perform the job of police officer.

#### (b) Eyes And Vision

The medical evaluation shall minimally include visual acuity (Snellen) and peripheral vision testing using a standardized testing device (Titmus or Optec Vision Screener or other similar vision screening device).

Contact lenses are not permitted to meet the uncorrected standard.

X-chrom contact lens use is not permitted to meet the color standard.

When the candidate is being tested, he/she must present without wearing contact lenses for at least several hours, so that uncorrected vision can be accurately tested.

##### 1. Category A medical conditions shall include:

- a. Uncorrected distance vision worse than 20/100 in either eye.
- b. corrected distant vision worse than 20/20 in the better eye UNLESS – the vision in the better eye alone is at least 20/25 AND the vision with both eyes together is 20/20 or better,
- c. Peripheral vision of less than 70 degrees temporally and 45 degrees nasally in either eye on screening examination AND/OR any history of conditions limiting field of vision will necessitate additional assessment by an eye care professional who will perform a formal detailed quantitative visual field assessment to determine if the binocular visual field is 140 degrees (at least 70 degrees temporally in each eye) above and below the meridian,

- d. Demonstration of color vision deficit on testing by Ishihara or Richmond pseudo-isochromatic plates.  
Candidates who demonstrate a color deficiency with Ishihara or Richmond testing may be re-tested with a Farnsworth D-15. Two or more major “cross-over” errors (defined as a sequence jump of 4 or more in the cap sequence created by the test subject) on the Farnsworth D-15 is a Category A condition,
- e. Vision (refraction) corrective surgery that has not stabilized in terms of diopter changes documented at least 2 weeks apart or if there is residual glare, halos, starburst, monocular diplopia, continued use of steroid drops, presence of haze on examination, microstriae, dryness affecting functional vision, active infection or loose epithelium.

2. Category B medical conditions shall include:

- a. diseases of the eye such as cataracts, retinal detachment, progressive retinopathy, glaucoma or optic neuritis, which, if present, and not severe enough to be disqualifying should be followed on a regular basis to ascertain continued adequate visual capability to safety and effectively perform the essential police duties,
- b. any other ophthalmological surgical procedures, such as, but not limited to retinal detachment repair, periorbital muscle procedures,
- c. any other vision disorder or eye condition that results in an individual not being able to safely and effectively perform the job of police officer.

(c) Ears And Hearing

The medical evaluation shall minimally include audiograms performed in a sound-treated booth compliant with the most recent version of ANSI S3.1 (Criteria for permissible ambient noise during audiometric testing) with equipment calibrated to the most recent version of ANSI standard S3.6 (Specification for Audiometers). If a booth is unavailable, the test room sound pressure levels should not exceed those specified in the Federal OSHA “Audiometric test rooms” standard (29 CFR 1910.95, Appendix D).

1. Category A medical conditions shall include:

Hearing deficit in pure tone thresholds in both ears, the deficit in each ear averaging 35 dB HL or worse at 500, 1000, 2000 and 3000 Hz,

Candidates failing the Category A pure tone threshold standard and who still wish to be considered for appointment will be required to have follow-up examinations that include:

full audiological examination, including speech reception threshold (SRT) and speech discrimination testing (NU-6 word lists) in both ears individually,

AND

full otological examination.

In order to pass they must demonstrate:

Pure tone thresholds in better ear indicating average hearing deficit at 500, 1000, 2000, and 3000 Hz to be lower than 35 dB HL,

AND

Performance score of 80% or better on the speech discrimination test in the better ear.

## **HEARING AIDS:**

Initial hearing examinations must take place unaided.

Candidates who cannot pass the initial examination should be referred to a licensed audiologist for the follow-up examination. Candidates may use hearing aids for the follow-up examination. Candidates using hearing aids must pass the follow-up examination based on sound field-testing, using the criteria listed above.

### **2. Category B medical conditions shall include:**

- a. perforated tympanum,
- b. auditory canal - atresia, severe stenosis, or tumor,
- c. severe external otitis,
- d. auricle - severe agenesis or traumatic deformity,
- e. mastoid - severe mastoiditis or surgical deformity,
- f. Meniere's disease, labyrinthitis or any disorder of equilibrium,
- g. otitis media,
- h. any other hearing disorder or ear condition that results in an individual not being able to safely and effectively perform the job of police officer.

## **(d) Nose, Mouth, And Throat**

### **1. Category A medical conditions shall include:**

- a. tracheostomy,
- b. aphonia,
- c. absent sense of smell,
- d. congenital or acquired deformities which interfere with wearing a gas mask.

### **2. Category B medical conditions shall include:**

- a. congenital or acquired deformities not covered in Category A,
- b. defects of articulation that materially interfere with verbal communication,
- c. defects of rate (stuttering, stammering, or cluttering) that interfere with verbal communication,
- d. chronic severe rhinitis,
- e. any other nose, oropharynx, trachea, esophagus, or larynx condition that interferes with breathing or speech or otherwise results in an individual not being able to safely and effectively perform the job of police officer.

## **(e) Respiratory**

### **1. Category A medical conditions shall include:**

- a. current lung abscess or current empyema,
- b. active untreated pulmonary tuberculosis,
- c. current pneumothorax,
- d. interstitial disease with abnormal exercise oxygen desaturation(<90%),

e. obstructive pulmonary disease, meeting the following criteria:

- i. cough and low grade wheezing between exacerbations,
- ii.  $FEV_1/FVC < 0.7$  **AND**  $FEV_1 < 50\%$  predicted at testing with spirometry performed as described in Section IV(2)(o)<sup>1</sup>,
- iii. required use of short-acting bronchodilatory medications prior to exercise.

2. Category B medical conditions shall include:

- a. lobectomy or pneumonectomy,
- b. obstructive disease not meeting Category A criteria,
- c. chronic bronchitis,
- d. emphysema,
- e. bronchiectasis,
- f. history of bronchiectasis, bronchitis, fibrous pleuritis, fibrosis, cystic disease, tuberculosis, mycotic lung disease, or pneumothorax,
- g. interstitial disease with normal exercise oxygen saturation,
- h. any other respiratory condition that results in an individual not being able to safely and effectively perform the job of police officer.

(f) Cardiovascular

1. Cardiac

a. Category A medical conditions shall include:

- i. current diagnosis of angina pectoris,
- ii. current congestive heart failure,
- iii. ventricular aneurysm,
- iv. acute or chronic pericarditis, endocarditis, or myocarditis. Endocarditis with resultant significant valvular lesions, or myocarditis leading to myocardial insufficiency,
- v. cardiac or multi-organ transplant or left ventricular assist device or other mechanical aide to circulation,
- vi. third degree AV block without cardiac pacemaker,
- vii. coronary artery disease, cardiac hypertrophy, or other cardiac condition without evidence of a functional capacity equal to or greater than 12 METs without evidence of ischemia,
- viii. recurrent syncope,
- ix. history of sudden cardiac death syndrome,
- x. hemodynamically significant valvular heart disease,
- xi. Non-rheumatic atrial fibrillation with CHADS 2 score  $\geq 2$  or  $CHA_2DS_2-VASc$  score  $\geq 1$  **not** taking anticoagulant medication. (for persons taking anticoagulant medication, see section IV.(l)1.(c) ),

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<sup>1</sup> Vestbo J, Hurd SS, Agusti AG, *et al.* Global Strategy for the Diagnosis, Management and Prevention of Chronic Obstructive Pulmonary Disease, GOLD Executive Summary. *Am J Respir Crit Care Med.* 2012.

xii. automatic implantable cardioverter defibrillator (AICD).

b. Category B medical conditions shall include:

- i. coronary artery disease not covered in Category A,
- ii. significant *arrhythmias (either hemodynamically significant or in representing an elevated risk of hemodynamically compromising rhythm alteration)*,
- iii. cardiac hypertrophy,
- iv. history of myocardial infarction, coronary artery bypass, coronary angioplasty, stent placement, or atherectomy,
- v. congenital abnormality,
- vi. cardiac pacemaker,
- vii. any other cardiac condition that results in an individual not being able to safely and effectively perform the job of police officer.

## 2. Vascular System

a. Category A medical conditions shall include:

- i. congenital or acquired lesions of the aorta and major vessels,
- ii. marked circulatory instability as indicated by orthostatic hypotension, persistent tachycardia, and severe peripheral vasomotor disturbances,
- iii. aneurysm of a major vessel, congenital or acquired,
- iv. untreated persistent hypertension (systolic blood pressure of 160 mmHg or greater or diastolic blood pressure of 100 mmHg or greater),
- v. current diagnosis of embolism or thrombophlebitis.

b. Category B medical conditions shall include:

- i. persistent hypertension controlled through medication (systolic blood pressure less than 160 mmHg and diastolic blood pressure less than 100 mmHg),
- ii. peripheral vascular disease, including intermittent claudication, Raynaud's disease, and Buerger's disease,
- iii. recurrent thrombophlebitis,
- iv. chronic lymphedema,
- v. severe or symptomatic varicose veins or venous insufficiency,
- vi. any other vascular condition that results in an individual not being able to safely and effectively perform the job of police officer.

## (g) Gastrointestinal

(1) Category A medical conditions shall include:

- a. liver or multi-organ transplantation,
- b. active gastrointestinal bleeding.

(2) Category B medical conditions shall include:

- a. cholecystitis,
- b. gastritis,
- c. chronic or acute hepatitis,

- d. hernia,
- e. inflammatory bowel disease,
- f. intestinal obstruction,
- g. pancreatitis,
- h. bowel resection,
- i. gastrointestinal ulcer,
- j. cirrhosis,
- k. diverticulitis,
- l. any other gastrointestinal condition that results in an individual not being able to safely and effectively perform the job of police officer.

(h) Reproductive

1. Category A medical conditions shall include:

- a. none.

2. Category B medical conditions shall include:

- a. pregnancy, for its duration. Any candidate who is pregnant shall be evaluated based on the candidate's ability to perform as a police officer. Such evaluation shall be based in part on the timing of training and duties as related to pregnancy duration and postpartum recovery. Furthermore, a pregnant candidate shall be informed of the potential risks to her fetus in the performance of essential job functions, due to possible exposures to hazardous materials and physical contact,
- b. any other reproductive condition that results in an individual not being able to safely and effectively perform the job of police officer.

(i) Genitourinary

1. Category A medical conditions shall include:

- a. renal disease requiring dialysis,
- b. renal or multi-organ transplantation.

2. Category B medical conditions shall include:

- a. any other renal, urinary, or genital condition that results in an individual not being able to safely and effectively perform the job of police officer.

(j) Neurological

1. Category A medical conditions shall include:

- a. ataxia,
- b. cerebrovascular disease with documented episodes of neurologic impairment such as cerebrovascular accidents ( CVAs) and transient ischemic attacks (TIAs),
- c. multiple sclerosis with activity or evidence of progression within previous three years,
- d. muscular dystrophy,
- e. myasthenia gravis,
- f. ALS,
- g. all epilepsy syndromes to include psychomotor, focal, petit mal, or grand mal seizures other than for those with all of the following:

- i. i.no seizure for 1 year off all anti-epileptic medications or 5 years on a constant dose of the same medication,
  - ii. normal CT and epilepsy protocol MRI of the brain,
  - iii. normal neurological examinations, and
  - iv.a definitive statement from a qualified neurologist specializing in seizure disorders (epileptologist) attesting to items i. through iii. above, and that the candidate is neurologically cleared for police academy training and the performance of a police officer's essential job functions.
- h. single first-time unprovoked seizure or unexplained episode of loss of consciousness less than 6 months prior to evaluation,
- i. choreoathetosis,
- j. dementia,
- k. any disorder affecting equilibrium which is acute, episodic, chronic, or recurrent.

2. Category B medical conditions shall include:

- a. congenital conditions and malformations,
- b. migraines,
- c. clinical disorders with paresis, paralysis, loss of coordination, abnormal motor function, or abnormalities of sensation,
- d. history of subdural, subarachnoid, or intracerebral hemorrhage,
- e. traumatic brain injury, concussion or multiple incidents of head trauma,
- f. any other neurological condition that results in an individual not being able to safely and effectively perform the job of police officer.

(k) Skin

1. Category A medical conditions shall include:

- a. none.

2. Category B medical conditions shall include:

- a. non-localized, i.e., widespread, skin disease,
- b. extensive skin grafts,
- c. contact allergies,
- d. any other dermatologic condition that results in an individual not being able to safely and effectively perform the job of police officer.

(l) Hematopoietic and Lymphatic

1. Category A medical conditions shall include:

- a. hemorrhagic states requiring replacement therapy, including hemophilia,
- b. sickle cell disease (homozygous),
- c. chronic anticoagulation therapy.

2. Category B medical conditions shall include:

- a. anemia, leukopenia, or thrombocytopenia,
- b. polycythemia vera,
- c. splenomegaly,



- d. history of thromboembolic disease,
- e. any other hematological condition that results in an individual not being able to safely and effectively perform the job of police officer.

(m) Endocrine And Metabolic

1. Category A medical conditions shall include:

- a. uncontrolled diabetes mellitus,
- b. insulin dependent diabetes not controlled by the use of a pump or basal/bolus techniques,
- c. insulin dependent diabetes not meeting criteria described in Appendix A.

2. Category B medical conditions shall include:

- a. Diabetes mellitus,

Note: Any patient with diabetes is required to provide medical information indicating that they meet the requirements described in Appendix A.

- b. diseases of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland of clinical significance,
- c. nutritional deficiency disease or metabolic disorder,
- d. any other endocrine or metabolic condition that results in an individual not being able to safely and effectively perform the job of police officer.

(n) Tumors and Malignant Disease

1. Category A medical conditions shall include:

- a. none.

2. Category B medical conditions shall include:

- a. malignant disease which is newly diagnosed, untreated, or currently being treated. The medical evaluation of any candidate with malignant disease which is newly diagnosed, untreated, or currently being treated shall be deferred until treatment has been completed. Treated malignant disease shall be evaluated based on that individual's current physical condition and on the likelihood of that individual's disease to recur or progress.
- b. any other tumor or malignancy that results in an individual not being able to safely and effectively perform the job of police officer.

(o) Psychiatric

1. Category A medical conditions include current or past diagnoses of:

- a. disorders of behavior,
- b. anxiety disorders,
- c. disorders of thought,
- d. disorders of mood,
- e. disorders of personality.

2. Category B medical conditions shall include:

- a. a history of any psychiatric condition, behavior disorder, or substance abuse problem not covered in Category A. Such history shall be evaluated based on that individual's history, current status, prognosis, and ability to respond to the stressors of the job,
- b. any other psychiatric condition that results in an individual not being able to safely and effectively perform the job of police officer.

(p) Conditions Not Otherwise Covered

1. Category A medical conditions shall include:

a. none.

2. Category B medical conditions shall include:

- a. connective tissue and autoimmune diseases, including dermatomyositis, lupus erythematosus, scleroderma, and rheumatoid arthritis,
- b. history of heat stroke, frostbite, or other thermal injury,
- c. potentially transmissible infectious disease,
- d. sleep disorders such as obstructive sleep apnea, central sleep apnea and narcolepsy,
- e. multi-system degenerative disorders,
- f. any other systemic condition that results in an individual not being able to safely and effectively perform the job of police officer.

(q) Chemicals, Drugs, And Medications

1. Category A medical conditions shall include:

a. active alcoholism or substance abuse.

2. Category B medical conditions shall include the regular use of various chemicals and drugs, including -- but not limited to -- the following categories:

- a. cardiovascular agents,
- b. narcotics,
- c. sedative-hypnotics,
- d. stimulants,
- e. psychoactive agents,
- f. systemic steroids,
- g. any other chemical, drug, or medication that results in an individual not being able to safely and effectively perform the job of police officer.

## V. Medical Standards for Municipal Fire Fighters

(1) Medical Evaluation<sup>2</sup>: Each municipal fire department shall establish and implement a pre-placement medical evaluation for candidates. During the medical evaluation, the physician shall evaluate each individual to ascertain the presence of any medical conditions listed in these standards, or any medical conditions not listed which would prevent the individual from performing the essential job functions without posing significant risk. It is our intent to encourage the use of professional judgment regarding medical conditions which are not specifically listed. A candidate shall not be certified as meeting the medical requirements of these standards if the physician determines that the candidate has any Category A medical condition specified in these standards. Furthermore, a candidate shall not be certified as meeting the medical requirements of these standards if the physician determines that the candidate has a Category B medical condition that is of sufficient severity to prevent the candidate from performing the essential functions of a fire fighter without posing a significant risk to the safety and health of him/herself or others.

(2) The medical evaluation shall minimally include the following:

- ☐ (a) a comprehensive medical history
- ☐ a baseline (pre-placement) occupational history, including significant past exposures and training and experience with personal protection equipment
- ☐ (b) height and weight
- ☐ (c) vital signs: pulse, respiration, blood pressure, and, if indicated, temperature
- ☐ (d) dermatological system
- ☐ (e) ears, eyes, nose, mouth, throat
- ☐ (f) cardiovascular system
- ☐ (g) respiratory system
- ☐ (h) gastrointestinal system
- ☐ (i) genitourinary system
- ☐ (j) endocrine and metabolic systems
- ☐ (k) musculoskeletal system
- ☐ (l) neurological system
- ☐ (m) mental status evaluation. Based on the severity, diagnosis, and impairment of any identified behavior or condition, the initial examiner is encouraged to consider referral of the applicant to a doctoral level mental health professional for further evaluation. In general, the current or recent use of psychotropic medications shall be reviewed by a Board certified psychiatrist.
- ☐ (n) audiometry. Audiograms should be performed in an ANSI approved "soundproof" booth (ANSI S3.1-1977) with equipment calibrated to ANSI standards (ANSI S3.6-1973). If a booth is unavailable, the test room sound pressure levels should not exceed those specified in the Federal OSHA noise regulations (29 CFR 1910.25),
- ☐ (o) visual acuity and peripheral vision testing

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<sup>2</sup> Physicians are also advised to ascertain the presence of any medical conditions listed in the National Fire Protection Association's (NFPA) 1582, *Medical Requirements for Fire Fighters*, which would prevent the individual from performing the essential job functions without posing a significant risk.

- (p) pulmonary function testing. A baseline test should be administered by an experienced individual. Only a spirogram that is technically acceptable and demonstrates the best efforts by an individual should be used to calculate the Forced Vital Capacity (FVC) and Forced Expiratory Volume in one second (FEV1.0),
- (q) review of hepatitis B immunization status including hepatitis B surface antibody titer if immunized, offer of hepatitis B vaccine if not fully immunized or HbgAb titer less than 10 and documentation of declination if vaccination refused by examinee,
- (r) a Purified Protein Derivative (PPD) test for tuberculosis, based on individual departmental infection control plans, and,
- (s) other diagnostic testing where indicated.

(3) The medical evaluation process should also include:

- (a) a review of tetanus immunization status.

(4) All medical information collected as part of a medical evaluation shall be considered confidential medical information, and shall be released by the physician only with the specific written consent of the candidate. The physician shall report the results of the medical evaluation to the candidate, including any medical condition(s) disclosed during the medical evaluation, and the recommendation whether the candidate is medically certified to perform as a fire fighter. The physician shall inform the fire department only whether or not the candidate is medically certified to perform as a fire fighter. The specific written consent of the candidate shall be required to release confidential medical information to the fire department, following guidelines set forth under the Americans With Disabilities Act (ADA) and other relevant policies.

(5) Category A and Category B Medical Conditions:

- (a) A Category A Medical Condition is a medical condition that would preclude an individual from performing the essential job functions of a municipal fire fighter in a training or emergency operational environment, or present a significant risk to the safety and health of that individual or others.
- (b) A Category B Medical Condition is a medical condition that, based on its severity or degree, may or may not preclude an individual from performing the essential job functions of a municipal fire fighter in a training or emergency operational environment, or present a significant risk to the safety and health of that individual or others.

(6) The Commonwealth of Massachusetts Human Resources Division (HRD) has adopted the National Fire Protection Association (NFPA) 1582, Standard on Medical Requirements for Firefighters as the medical standards for municipal firefighters.

The current NFPA firefighter medical standards Chapter 6 Medical Evaluations of Candidates is as follows. All content shown within NFPA 1582 remains the property of the National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, Massachusetts, and shall not be reproduced without the written consent of the NFPA. By making the content of NFPA 1582 available for this document, the NFPA does not waive any rights in the copyright of NFPA 1582.

The following shall be components of the Initial Medical Standards for Firefighters NFPA 1582, Chapter 6 Medical Evaluations of Candidates:

6.1 Medical Evaluation. A medical evaluation of a candidate shall be conducted prior to the candidate being placed in training programs or fire department emergency response activities.

6.1.1 The medical evaluation of a candidate shall include a medical history, examination, and any laboratory tests required to detect physical or medical conditions(s) that could adversely affect his/her ability to safely perform the essential job tasks outlined in 5.1.1.

6.1.2 The standard shall provide specific requirements for candidates based on medical conditions that can affect a candidate's ability to safely perform the essential job tasks of a firefighter.

## 6.2 Medical Conditions Affecting ability to Safely Perform Essential Job Tasks.

6.2.1 Medical conditions that can affect a candidate's ability to safely perform essential job tasks shall be designated either Category A or Category B.

6.2.2 Candidates with Category A medical conditions shall not be certified as meeting the medical requirements of this standard.

6.2.3 Candidates with Category B medical conditions shall be certified as meeting the medical requirements of this standard only if they can perform the essential job tasks without posing a significant safety and health risk to themselves, members, or civilians.

## 6.3 Head and Neck.

### 6.3.1 Head

6.3.1.1 Category A medical conditions shall include the following:

- (1) Defect of skull preventing helmet use or leaving underlying brain unprotected from trauma.
- (2) Any skull or facial deformity that would not allow for a successful fit test for respirators used by that department.
- (3) Any head condition that results in the candidate not being able to safely perform one or more of the essential job tasks.
- (4)

6.3.1.2 Category B medical conditions shall include the following:

- (1) Deformities to the skull such as depressions or exostoses
- (2) Deformities of the skull associated with evidence of disease of the brain, spinal cord, or peripheral nerves
- (3) Loss or congenital absence of the bony substance of the skull.

### 6.3.2 Neck

6.3.2.1 Category A medical conditions shall include any neck condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

6.3.2.2 Category B medical conditions shall include the following;

- (1) Thoracic outlet syndrome
- (2) Congenital cysts, chronic draining fistulas, or similar lesions
- (3) Contraction of neck muscles

## 6.4 Eyes and Vision

6.4.1 Category A medical conditions shall include the following;

- (1) Far visual acuity less than 20/40 binocular, corrected with contact lenses or spectacles, or far visual acuity less than 20/100 binocular for wearers of hard contacts or spectacles, uncorrected
- (2) Color perception – monochromatic vision resulting in inability to use imaging devices such as thermal imaging cameras
- (3) Monocular vision
- (4) Any eye condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

6.4.2 Category B medical conditions shall include the following:

- (1) Diseases of the eye such as retinal detachment, progressive retinopathy, or optic neuritis
- (2) Ophthalmological procedures such as radial keratotomy, Lasik procedure, or repair of retinal detachment
- (3) Peripheral vision in the horizontal meridian of less than 110 degrees in the better eye or any condition that significantly affects peripheral vision in *both* eyes

6.5 Ears and Hearing.

6.5.1 Category A medical conditions shall include the following:

- (1) Chronic vertigo or impaired balance as demonstrated by the inability to tandem gait walk
- (2) On audiometric testing, average hearing loss in the unaided better ear greater than 40 decibels (dB) at 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz when the audiometric device is calibrated to ANSI A24.5, *Audiometric Device Testing*
- (3) Any ear condition (or hearing impairment) that results in the candidate not being able to safely perform one or more of the essential job task.
- (4) Hearing aid or cochlear implant

6.5.2 Category B medical conditions shall include the following:

- (1) Unequal hearing loss
- (2) Average uncorrected hearing deficit at the test frequencies 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz greater than 40 dB in either ear
- (3) Atresia, stenosis, or tumor of the auditory canal
- (4) External otitis, recurrent
- (5) Agenesis or traumatic deformity of the auricle
- (6) Mastoiditis or surgical deformity of the mastoid
- (7) Meniere's syndrome, labyrinthitis, or tinnitus
- (8) Otitis media, recurrent
- (9) Surgical procedures to correct or improve hearing or other conditions of the ear

6.6 Dental

6.6.1 Category A medical conditions shall include any dental condition that results in inability to safely perform one or more of the essential job tasks.

6.6.2 Category B medical conditions shall include the following:

- (1) Diseases of the jaws or associated tissues
- (2) Orthodontic appliances
- (3) Oral tissues, extensive loss
- (4) Relationship between the mandible and maxilla that interferes with satisfactory postorthodontic replacement or ability to use protective equipment

## 6.7 Nose, Oropharynx, Trachea, Esophagus, and Larynx.

### 6.7.1 Category A medical conditions shall include the following:

- (1) Tracheostomy
- (2) Aphonia
- (3) Any nasal, oropharyngeal, tracheal, esophageal, or laryngeal conditions that results in inability to safely perform one or more of the essential job tasks including fit testing for respirators such as N-95 for medical response, P-100 for particulates and certain vapors, and SCBA for fire and hazmat operations

### 6.7.2 Category B medical conditions shall include the following:

- (1) Congenital or acquired deformity
- (2) Allergic rhinitis
- (3) Epistaxis, recurrent
- (4) Sinusitis, recurrent
- (5) Dysphonia
- (6) Anosmia
- (7) Tracheal stenosis
- (8) Nasopharyngeal polyposis
- (9) Obstructive apneas (e.g. sleep apnea) if unresponsive to treatment

## 6.8. Lungs and Chest Wall

### 6.8.1 Category A medical conditions shall include the following:

- (1) Active hemoptysis
- (2) Current empyema
- (3) Pulmonary hypertension
- (4) Active tuberculosis
- (5) A forced vital capacity (FVC) or forced expiratory volume in 1 second (FEV<sub>1</sub>) less than 70 percent predicted even independent of disease
- (6) Obstructive lung diseases (e.g., emphysema, chronic bronchitis, asthma) with an absolute FEV<sub>1</sub>/FVC less than 0.70 and with either the FEV<sub>1</sub> below normal or both the FEV<sub>1</sub> and the FVC below normal (less than 0.80) (see references in F.2)
- (7) Hypoxemia – oxygen saturation less than 90 percent at rest or exercise desaturation by 4 percent or to less than 90 percent (exercise testing indicated when resting oxygen is less than 94 percent but greater than 90 percent)
- (8) Asthma – reactive airways disease requiring bronchodilator or corticosteroid therapy for 2 or more consecutive months in the previous 2 years, unless the candidate can meet the requirement in 6.8.1.1
- (9) Any pulmonary conditions that results in the candidate not being able to safely perform one or more of the essential job tasks
- (10) Lung transplant

6.8.1.1 A candidate who has in the past required bronchodilator, corticosteroid, or anti-inflammatory therapy (e.g., leukotriene receptor antagonists, such as Montelukast) for asthma but who does not believe he/she has asthma shall be evaluated by a pulmonologist or other expert in asthmatic lung diseases, such as an allergist, to determine if the candidate meets all the following:

- (1) Asthma has resolved without symptoms off medications for 2 years.
- (2) Allergen avoidance or desensitization has been successful.
- (3) Spirometry demonstrates adequate reserve (FVC and FEV<sub>1</sub> greater than or equal to 90 percent) and no bronchodilator response measured off all bronchodilators on the day of testing.

- (4) Normal or negative response to provocative challenge testing (e.g., cold air, exercise (12 METs) methacholine, histamine, mannitol, or hypertonic saline) or negative response to exercise challenge.

6.8.1.1.1 Challenge testing shall be performed off all anti-inflammatory medications (e.g., inhaled or oral steroids, leukotriene receptor antagonists) for 4 weeks preceding the test, off all antihistamines (e.g., oral allergy medications) for 1 week, and off all bronchodilators on the day of testing.

6.8.2 Category B medical conditions shall include the following:

- (1) Pulmonary resectional surgery, chest wall surgery, and pneumothorax
- (2) Pleural effusion
- (3) Fibrothorax, chest wall deformity, and diaphragm abnormalities
- (4) Interstitial lung diseases
- (5) Pulmonary vascular diseases or history of pulmonary embolism
- (6) Bronchiectasis, if abnormal pulmonary function or recurrent infections
- (7) Infectious diseases of the lung or pleural space
- (8) Cystic fibrosis
- (9) Central or obstructive apnea (e.g., sleep apnea) if unresponsive to treatment

6.9 Aerobic Capacity.

6.9.1 Category A medical conditions shall include an aerobic capacity less than 12 metabolic equivalents (METs) (12 METs = 42 mL O<sub>2</sub>/kg/min).

6.10 Heart and Vascular System.

6.9.1 Heart

6.10.1.1 Category A medical conditions shall include the following:

- (1) Coronary artery disease, including history of myocardial infarction, angina pectoris, coronary artery bypass surgery, coronary angioplasty, and similar procedures
- (2) Cardiomyopathy or congestive heart failure, including signs or symptoms of compromised left or right ventricular function or rhythm, including dyspnea, S3 gallop, peripheral edema, enlarged ventricle, abnormal ejection fraction, and/or inability to increase cardiac output with exercise
- (3) Acute pericarditis, endocarditis, or myocarditis
- (4) Syncope, recurrent
- (5) A medical condition requiring an automatic implantable cardiac defibrillator or history of ventricular tachycardia or ventricular fibrillation due to ischemic or valvular heart disease, or cardiomyopathy
- (6) Third-degree atrioventricular block
- (7) Cardiac pacemaker
- (8) Hypertrophic cardiomyopathy, including idiopathic hypertrophic subaortic stenosis
- (9) Any cardiac condition that results in the candidate not being able to safely perform one or more of the essential job tasks
- (10) Heart transplant

6.10.1.2 Category B medical conditions shall include the following:

- (1) Valvular lesions of the heart, including prosthetic valves
- (2) Recurrent supraventricular or atrial tachycardia, flutter, or fibrillation
- (3) Left bundle branch block
- (4) Second-degree atrioventricular block in the absence of structural heart disease
- (5) Sinus pause more than 3 seconds



- (6) Ventricular arrhythmia (history or presence of multifocal PVCs or nonsustained ventricular tachycardia on resting EKG with or without symptoms; history or presence of sustained ventricular tachycardia with or without symptoms)
- (7) Cardiac hypertrophy or hypertrophic cardiomyopathy
- (8) History of a congenital abnormality
- (9) Chronic pericarditis, endocarditis, or myocarditis

#### 6.10.2 Vascular System.

##### 6.10.2.1 Category A medical conditions shall include the following;

- (1) Hypertension
  - a. Uncontrolled or poorly controlled hypertension
  - b. Hypertension with evidence of end organ damage
- (2) Thoracic or abdominal aortic aneurysm
- (3) Carotid artery stenosis or obstruction resulting in greater than or equal to 50 percent reduction in blood flow
- (4) Peripheral vascular disease resulting in symptomatic claudication
- (5) Any other vascular condition that results in inability to safely perform one or more of the essential job tasks

##### 6.10.2.2 Category B medical conditions shall include the following:

- (1) Vasospastic phenomena such as Raynaud's phenomenon
- (2) Thrombophlebitis, thrombosis, or varicosities
- (3) Chronic lymphedema due to lymphadenopathy or venous valvular incompetency
- (4) Congenital or acquired lesions of the aorta or major vessels
- (5) Circulatory instability as indicated by orthostatic hypotension, persistent tachycardia, and peripheral vasomotor disturbances
- (6) History of surgical repair of aneurysm of the heart or major vessel

#### 6.11 Abdominal Organs and Gastrointestinal System.

##### 6.11.1 Category A medical conditions shall include the following:

- (1) Presence of uncorrected inguinal/femoral hernia regardless of symptoms
- (2) Any gastrointestinal condition that results in the candidate not being able to safely perform one or more of the essential job tasks

##### 6.11.2 Category B medical conditions shall include the following:

- (1) Cholecystitis
- (2) Gastritis
- (3) GI bleeding
- (4) Acute hepatitis
- (5) Hernia including the following:
  - a. Uncorrected umbilical, ventral, or incisional hernia if significant risk exists for infection or strangulation
  - b. Significant symptomatic hiatal if associated with asthma, recurrent pneumonia, chronic pain, or chronic ulcers
  - c. Surgically corrected hernia more than 3 months after surgical correction
- (6) Inflammatory bowel disease or irritable bowel syndrome
- (7) Intestinal obstruction
- (8) Pancreatitis

- (9) Diverticulitis
- (10) History of gastrointestinal surgery
- (11) Peptic or duodenal ulcer or Zollinger-Ellison syndrome
- (12) Asplenia
- (13) Cirrhosis, hepatic or biliary
- (14) Chronic active hepatitis

#### 6.12 Metabolic Syndrome.

6.12.1 Category A medical conditions shall include metabolic syndrome with aerobic capacity less than 12 METs.

6.12.2 Category B medical conditions shall include metabolic syndrome with aerobic capacity 12 METs or greater.

#### 6.13 Reproductive System. See B.1.2.1

6.13.1 Category A medical conditions shall include any genital condition that results in inability to safely perform one or more of the essential job tasks.

6.13.2 Category B medical conditions shall include the following:

- (1) Pregnancy, for its duration
- (2) Dysmenorrhea
- (3) Endometriosis, ovarian cysts, or other gynecologic conditions
- (4) Testicular or epididymal mass

#### 6.14 Urinary System.

6.14.1 Category A medical conditions shall include the following:

- (1) Renal failure or insufficiency requiring continuous ambulatory peritoneal dialysis (CAPD) or hemodialysis
- (2) Any urinary condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.14.2 Category B medical conditions shall include the following:

- (1) Diseases of the kidney
- (2) Diseases of the ureter, bladder, or prostate

#### 6.15 Spine and Axial Skeleton.

6.15.1 Category A medical conditions shall include the following:

- (1) Scoliosis of thoracic or lumbar spine with angle greater than or equal to 40 degrees
- (2) History of spinal surgery with rods that are still in place
- (3) Any spinal or skeletal condition producing sensory or motor deficit(s) or pain due to radiculopathy or nerve root compression
- (4) Any spinal or skeletal condition causing pain that frequently or recurrently requires narcotic analgesic medication
- (5) Cervical vertebral fractures with multiple vertebral body compression greater than 25 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (partial, moderate, severe), abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery

- (6) Thoracic vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (severe – with or without surgery), abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery
- (7) Lumbosacral vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (partial, moderate, severe), fragmentation, abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery
- (8) Any spinal or skeletal condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.15.2 Category B medical conditions shall include the following:

- (1) Congenital or developmental malformations of the back, particularly those that can cause instability, neurological deficits, pain or limit flexibility
- (2) Scoliosis with angle less than 40 degrees
- (3) Arthritis or the cervical, thoracic, or lumbosacral spine
- (4) Facet atrophism, high lumbosacral angle, hyperlordosis. Schmorl's nodes, Scheuermann's disease, spina bifida occulta, spondylolisthesis, spondylolysis, or transitional vertebrae
- (5) History of infections or infarcts in the spinal cord, epidural space, vertebrae, or axial skeletal joints
- (6) History of discectomy or laminectomy or vertebral fractures
- (7) History of spine fusion that results in instability; reduced mobility, strength, or range of motion; or persistent pain.

6.16 Extremities

6.16.1 Category A medical conditions shall include the following:

- (1) Joint replacement, unless all the following conditions are met:
  - a. Normal range of motion without history of dislocations post-replacement
  - b. Repetitive and prolonged pulling, bending, rotations, kneeling, crawling, and climbing without pain or impairment
  - c. No limiting pain
  - d. Evaluation by an orthopedic specialist who concurs that the candidate can complete all essential job tasks listed in Chapter 5
- (2) Amputation or congenital absence of upper-extremity limb (hand or higher)
- (3) Amputation of either thumb proximal to the mid-proximal phalanx
- (4) Amputation or congenital absence of lower-extremity limb (foot or above) unless the candidate meets all of the following conditions:
  - a. Stable, unilateral below-the-knee (BKA) amputation with at least the proximal third of the tibia present for a strong and stable attachment point with the prosthesis
  - b. Fitted with a prosthesis that will tolerate the conditions present in structural firefighting when worn in conjunction with standard fire fighting PPE
  - c. At least 6 months of prosthetic use in a variety of activities with no functional difficulties
  - d. Amputee limb healed with no significant inflammation, persistent pain, necrosis, or indications of instability at the amputee limb attachment point
  - e. No significant psychosocial issues pertaining to the loss of limb or use of prosthesis
  - f. Evaluated by a prosthetic or orthopedic specialist with expertise in the fitting and function of prosthetic limbs who concurs that the candidate can complete all essential job tasks listed in Chapter 5, including wearing personal protective ensembles and SCBA while climbing ladders, operating from heights, and walking or crawling in the dark along narrow and uneven surfaces that may be wet or icy
  - g. Has passed the department's applicant physical ability test as a condition of appointment without accommodations or modification of the protocol

- (5) Chronic nonhealing or recent bone grafts
- (6) History of more than one dislocation of shoulder without surgical repair or with history of recurrent shoulder disorders within the last 5 years with pain or loss of motion, and with or without radiographic deviations from normal
- (7) Any extremity condition that results in the candidate not being able to safely perform one or more of the essential job tasks

#### 6.16.2 Category B medical conditions shall include the following:

- (1) History of shoulder dislocation with surgical repair
- (2) Significant limitation of function of shoulder, elbow, wrist, hand, or finger due to weakness, reduced range of motion, atrophy, unequal length, absence, or partial amputation
- (3) Significant lack of full function of hip, knee, ankle, foot, or toes due to weakness, reduced range of motion, atrophy, unequal length, absence, or partial amputation
- (4) History of meniscectomy or ligamentous repair of knee
- (5) History of intra-articular, malunited, or nonunion of upper or lower extremity fracture
- (6) History of osteomyelitis, septic, or rheumatoid arthritis
- (7) Bone hardware such as metal plates or rods supporting body during healing

#### 6.17 Neurological Disorders

##### 6.17.1 Category A medical conditions shall include the following:

- (1) Ataxias of heredo-degenerative type
- (2) Cerebral arteriosclerosis as evidenced by a history of transient ischemic attack, reversible ischemic neurological deficit, or ischemic stroke
- (3) Hemiparalysis or paralysis of a limb
- (4) Multiple sclerosis with activity or evidence of progression within previous 3 years
- (5) Myasthenia gravis with activity or evidence of progression within previous 3 years
- (6) Progressive muscular dystrophy or atrophy
- (7) Uncorrected cerebral aneurysm
- (8) All single unprovoked seizures and epileptic conditions, including simple partial, complex partial, generalized, and psychomotor seizure disorders other than as allowed in 6.17.1.1
- (9) Dementia (Alzheimer's and other neurodegenerative diseases) with symptomatic loss of function or cognitive impairment (e.g., less than or equal to 28 on Mimi-Mental Status Exam)
- (10) Parkinson's disease and other movement disorders resulting in uncontrolled movements, bradykinesia, or cognitive impairment (e.g., less than or equal to 28 on Mini-Mental Status Exam)
- (11) Any neurological conditions that results in the candidate not being able to safely perform one or more of the essential job tasks

##### 6.17.1.1 To be medically qualified a candidate shall meet all of the following:

- (1) No seizures for 1 year off all anti-epileptic medications or 5 years seizure free on a stable medical regimen
- (2) Neurologic examination is normal
- (3) Imaging (CAT or MRI scan) studies are normal
- (4) Awake and asleep EEG studies with photic stimulation and hyperventilation are normal
- (5) A definitive statement from a qualified neurological specialist that the candidate meets the criteria specified in 6.17.1.1(1) through 6.17.1.1(4) and that the candidate is neurologically cleared for fire-fighting training and the performance of a fire fighter's essential job tasks

##### 6.17.2 Category B medical conditions shall include the following:

- (1) Congenital malformations

- (2) Migraine
- (3) Clinical disorders with paresis, dyscoordination, deformity, abnormal motor activity, abnormality of sensation, or complaint of pain
- (4) History of subarachnoid or intraparenchymal hemorrhage
- (5) Abnormalities from recent head injury such as severe cerebral contusion or concussion

## 6.18 Skin

6.18.1 Category A medical conditions shall include the following:

- (1) Metastatic or locally extensive basal or squamous cell carcinoma or melanoma
- (2) Any dermatologic condition that would not allow for a successful fit test for any respirator required by the fire department
- (3) Any dermatologic condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.18.2 Category B medical conditions shall include the following:

- (1) Skin conditions of a chronic or recurrent nature (eczema, cystic acne, psoriasis) that cause skin openings or inflammation or irritation of the skin surface
- (2) Surgery or skin grafting
- (3) Mycosis fungoides
- (4) Cutaneous lupus erythematosus
- (5) Raynaud's phenomenon
- (6) Scleroderma (skin)
- (7) Vasculitic skin lesions
- (8) Atopic dermatitis/eczema
- (9) Contact or seborrheic dermatitis
- (10) Stasis dermatitis
- (11) Albinism, Darier's disease, ichthyosis, Marfan syndrome, neurofibromatosis, and other genetic conditions
- (12) Folliculitis, pseudo-folliculitis, miliaria, keloid folliculitis
- (13) Hidradenitis suppurativa, furuncles, carbuncles, or Grade IV acne (cystic)
- (14) Mechano-bullous disorders (epidermolysis bullosa, Hailey pemphigus, porphyria, pemphigoid)
- (15) Urticaria or angioedema

## 6.19 Blood and Blood-Forming Organs

6.19.1 Category A medical conditions shall include the following:

- (1) Hemorrhagic states requiring replacement therapy
- (2) Sickle cell disease (homozygous)
- (3) Clotting disorders
- (4) Any hematological conditions that results in inability to safely perform one or more of the essential job tasks

6.19.2 Category B medical conditions shall include the following:

- (1) Anemia
- (2) Leukopenia
- (3) Polycythemia vera
- (4) Splenomegaly
- (5) History of thromboembolic disease
- (6) Any other hematological condition that results in inability to safely perform essential job tasks

## 6.20. Endocrine and Metabolic Disorders

### 6.20.1 Category A medical conditions shall include the following:

- (1) Type 1 diabetes mellitus, unless a candidate meets all of the following criteria:
  - a. Is maintained by a physician knowledgeable in current management of diabetes mellitus on a basal/bolus (can include subcutaneous insulin infusion pump) regimen using insulin analogs
  - b. Has demonstrated over a period of at least 6 months the motivation and understanding required to closely monitor and control capillary blood glucose levels through nutritional therapy and insulin administration. Assessment of this shall take into consideration the erratic meal schedules, sleep disruption, and high aerobic and anaerobic workloads intrinsic to fire fighting
  - c. Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale
  - d. Has normal renal function based on a calculated creatinine clearance greater than 60 mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft-Gault or similar formula. Proteinuria is defined as 24-hour urine excretion of greater than or equal to 300 mg protein or greater than or equal to 300 mg of albumin per gram of creatinine in a random sample.)
  - e. Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy might be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability).
  - f. Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 MET) by ECG and cardiac imaging.
  - g. Has a signed statement and medical records from an endocrinologist or a physician with demonstrated knowledge in the current management of diabetes mellitus as well as knowledge of the essential job tasks and hazards of fire fighting as described in 5.1.1, allowing the fire department physician to determine whether the candidate meets the following criteria:
    - i. Is being successfully maintained on a regimen consistent with 6.20.1(1)(a) and 6.20.1(1)(b).
    - ii. Has had hemoglobin A1C measured at least four times a year (intervals of 2 or 3 months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. A hemoglobin A1C reading of 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels. This shall include evidence of a set schedule for blood glucose monitoring and a thorough review of data from such monitoring.
    - iii. Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors
    - iv. Has had no episodes of severe hypoglycemia (defined as requiring assistance of another ) in the preceding 1 years with no more than two episodes of severe hypoglycemia in the preceding 3 years.
    - v. Is certified not to have a medical contraindication to fire-fighting training and operations.
- (2) Insulin-requiring Type 2 diabetes mellitus, unless a candidate meets all of the following criteria:
  - a. Is maintained by a physician knowledgeable in current management of diabetes mellitus
  - b. Has demonstrated over a period of at least 3 months the motivation and understanding required to closely monitor and control capillary blood glucose levels through nutritional therapy and insulin administration. Assessment of this shall take into consideration the erratic meal schedules, sleep disruption, and high aerobic and anaerobic workloads intrinsic to fire fighting.

- c. Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale.
- d. Has normal renal function based on a calculated creatinine clearance greater than 60mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft\_Gault or similar formula. Proteinuria is defined as 24-hour urine excretion of greater than or equal to 300mg protein or greater than or equal to 300 mg of albumin per gram of creatinine in a random sample.)
- e. Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy can be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability.)
- f. Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 METS) by ECG and cardiac imaging.
- g. Has a signed statement and medical records from an endocrinologist or a physician with demonstrated knowledge in the current management of diabetes mellitus as well as knowledge of the essential job tasks and hazards of fire fighting as described in 5.1.1. allowing the fire department physician to determine whether the candidate meets the following criteria:
  - i. Is maintained on a stable insulin regimen and has demonstrated over a period of at least 3 months the motivation and understanding required to closely monitor and control capillary blood glucose levels despite varied activity schedules through nutritional therapy and insulin administration.
  - ii. Has had hemoglobin A1C measured at least four times a year (intervals of 2 or 3 months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. A hemoglobin A1C reading of 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels. This shall include evidence of a set schedule for blood glucose monitoring and a thorough review of data from such monitoring.
  - iii. Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors
  - iv. Has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding 1 year with no more than two episodes of severe hypoglycemia in the preceding 3 years.
  - v. Is certified not to have a medical contraindication to fire-fighting training and operations.
- (3) Any endocrine or metabolic conditions that results in the candidate not being able to safely perform one or more of the essential job tasks

#### 6.20.2 Category B medical conditions shall include the following:

- (1) Diseases of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland of clinical significance
- (2) Nutritional deficiency diseases of other metabolic disorders
- (3) Diabetes mellitus, not on insulin therapy, but controlled by diet, exercise, and/or oral hypoglycemic agents unless all of the following are met:
  - a. Has had hemoglobin A1C measured at least four times a year (intervals of 2 to 3 months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. A hemoglobin A1C reading of 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels. This shall include evidence of a set schedule for blood glucose monitoring and a thorough review of data from such monitoring.
  - b. If on oral hypoglycemic agents, has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding years.

- c. Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale.
- d. Has normal renal function based on a calculated creatinine clearance greater than 60 mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft-Gault or similar formula. Proteinuria is defined as 24-hour urine excretion of greater than or equal to 300 mg protein or greater than or equal to 300 mg of albumin per gram of creatinine in a random sample.)
- e. Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy might be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability).
- f. Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 MET) by ECG and cardiac imaging.

## 6.21 Systemic Diseases and Miscellaneous Conditions

6.21.1 Category A medical conditions shall include any systemic condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

6.21.2 Category B medical conditions shall include the following:

- (1) Connective tissue disease, such as dermatomyositis, systemic lupus erythematosus, scleroderma, and rheumatoid arthritis
- (2) History of thermal, chemical, or electrical burn injury with residual functional deficit
- (3) Documented evidence of a predisposition to recurrent heat stress rhabdomyolysis, metabolic acidosis, or exertion-related incapacitation

## 6.22 Tumors and Malignant Diseases

6.22.1 Category A medical conditions shall include the following:

- (1) Malignant disease that is newly diagnosed, untreated, or currently being treated, or under active surveillance due to the increased risk for reoccurrence
- (2) Any tumor or similar condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.22.2 Category B medical conditions shall be evaluated on the basis of an individual's current physical condition and on the staging and prognosis of the malignancy (i.e., likelihood that the disease will recur or progress), and include the following:

- (1) Benign tumors
- (2) History of CNS tumor or malignancy
- (3) History of head or neck malignancy
- (4) History of lung cancer
- (5) History of GI or GU malignancy
- (6) History of bone or soft tissue tumors or malignancies
- (7) History of hematological malignancy

## 6.23 Psychiatric Conditions

6.23.1 Category A medical conditions shall include any psychiatric condition that results in the candidate not being able to safely perform one or more of the essential job tasks.



6.23.2 Category B medical conditions shall include the following:

- (1) A history of psychiatric conditions or substance abuse problem
- (2) Requirement for medications that increase an individual's risk of heat stress, or other interference with the ability to safely perform essential job tasks

#### 6.24 Chemicals, Drugs, and Medications

6.24.1 Category A medical conditions shall include those that require chronic or frequent treatment with any of the following medications or classes of medications:

- (1) Narcotics, including methadone
- (2) Sedative-hypnotics
- (3) Full-dose or low-dose anticoagulation medications or any drugs that prolong prothrombin time (PT), partial thromboplastin time (PPT), or international normalized ratio (INR)
- (4) Beta-adrenergic blocking agents at doses that prevent a normal cardiac rate response to exercise, high-dose diuretics, or central acting antihypertensive agents (e.g., clonidine)
- (5) Respiratory medications: inhaled bronchodilators, inhaled corticosteroids, systemic corticosteroids, theophylline, and leukotriene receptor antagonists (e.g., Montelukast)
- (6) High-dose corticosteroids for chronic disease
- (7) Anabolic steroids
- (8) Any chemical, drug, or medication that results in the candidate not being able to safely perform one or more of the essential job tasks

6.24.1.1 Tobacco use shall be a Category A medical condition (where allowed by law).

6.24.1.2 Evidence of illegal drug use detected through testing, conducted in accordance with Substance Abuse and Mental Health Service Administration (SAMHSA), shall be a Category A medical condition.

6.24.1.3 Evidence of clinical intoxication or a measured blood alcohol level that exceeds the legal definition of intoxication according to the AHJ at the time of medical evaluation shall be a Category A medical condition.

6.24.2 Category B medical conditions shall include the use of the following:

- (1) Cardiovascular agents
- (2) Stimulants
- (3) Psychiatric medications
- (4) Other than high-dose systemic corticosteroids
- (5) Antihistamines
- (6) Muscle relaxants
- (7) Leukotriene receptor antagonists (e.g., Montelukast) used for allergies that do not affect the lower respiratory system

## VI. MUNICIPAL POLICE OFFICER ESSENTIAL FUNCTIONS

<b>A. PATROL AND INCIDENT RESPONSE</b>
Provide back-up to other police personnel.
In response to a report of child abuse, observe and evaluate the physical or mental condition of the child, notify the appropriate agencies, and/or place the child in protective custody to protect the child from physical or mental harm.
Respond to a crime in progress and secure the area to effect an arrest.
When confronted with victim(s), conduct assessment and administer immediate care to prevent further injury, trauma, or death.
Communicate/negotiate with a hostage taker to reduce his/her anxiety and prevent the loss of life pending arrival of hostage negotiator.
Appraise the situation, separate individuals, and discuss the grievances to restore order at a domestic dispute.
Use communications equipment (e.g., radio, computer, telephone) to exchange information relative to official duties (e.g., reporting status and location to dispatcher, maintaining contact with other agencies).
Operate a Department vehicle at a high rate of speed, using emergency lights and siren and maintaining public safety, to respond to emergency calls for service.
Request assistance from other police personnel.
Respond to an alarm, secure area, and inspect for entry to protect life and property and apprehend the violator or violators.
Participate in a large scale coordinated search for one or more persons (e.g., escapees, missing residents of mental health facilities, lost people, etc) to locate or apprehend the person(s).
Separate individuals in a fight or disturbance (not a domestic dispute) to restore order and minimize injury to those individuals or property.
Operate a Department vehicle under non-emergency conditions within a specific geographic area to observe and detect unusual activities or circumstances, or violations of the law in order to deter crime and provide service to the public.
Protect one or more persons (confidential sources, witnesses, etc.) to provide for the safety and security of the person(s) and the public.
Respond to incidents requiring your presence as specified in Departmental policies.
Maintain current information such as names, faces, and previous arrest records of known criminals believed to be in the area.
Observe and check entrances to buildings and premises to maintain security of property.
Identify a person as disturbed (e.g., mentally, emotionally) or incapacitated (e.g., drunk, epileptic) and detain that person in order to provide for placement.
Erect physical barriers, bodily serve as a barrier, issue verbal commands, and/or utilize the necessary degree of authority to effect the safe, peaceful, and orderly flow of a crowd of people.
Patrol a specific geographic area on foot to observe and detect unusual activities or circumstances, or violations of the law.
Serve on special details to help maintain peace (e.g., abortion demonstrations, animal rights).

**B. TRAFFIC ENFORCEMENT**

When outside of vehicle (e.g., making a traffic stop), monitor pedestrian or vehicular traffic to reduce risk of injury to self or others and take evasive action when necessary.

Conduct field sobriety tests to determine probable cause for breath or blood test and/or arrest for alcohol or drug use.

Protect an accident scene to allow for a determination of the facts of the accident.

Direct/reroute traffic, place emergency signaling devices (e.g., flares) or take other necessary action to ensure a safe and orderly flow of traffic when confronted with unusual traffic conditions (e.g., accidents, stoplight out, parades).

Determine the status (e.g., stolen, disabled) of a stopped or abandoned vehicle, including checking for inhabitants (e.g., children, victims).

Estimate vehicle speed visually or use speed detection equipment (e.g., radar, lidar, vascar, stopwatches) to determine the speed of a vehicle.

Stop vehicles for cause and check for required documents, defective equipment (e.g., headlights, tires), and other violations to issue citations or warnings and to aid in the safe and legal operation of vehicles on the road.

Issue a citation to a traffic violator.

Impound or supervise impounding of equipment or vehicles left on the roadway.

**C. INVESTIGATIONS**

Identify and collect evidence at a crime scene to preserve that evidence for use in an investigation.

Protect a crime scene from contamination by controlling access to the scene and erecting physical barriers to preserve the evidence of a crime.

Document the elements of a crime and identify potential witnesses and suspects to produce a prosecutable case.

Evaluate evidence (e.g., article, substance) to determine its relationship to an investigation.

Transport evidence to various locations (e.g., lab, court), maintaining an unbroken chain of custody.

Canvass the neighborhood, asking questions of persons in order to locate and identify one or more witnesses, victims, or suspects of a crime.

Inspect a suspected controlled substance to make a preliminary determination of its identity and request further lab tests as needed.

Determine the probable facts of the incident from examination and comparison of statements and other evidence.

Interview and take written statements from the general public, witnesses, victims, or suspects to obtain and record information pertinent to the enforcement, regulatory, and service functions of the Department.

Evaluate individuals to determine their credibility and/or manner in which they should be handled (e.g., during interrogations).

Identify assets for potential seizure at a crime scene.

Observe one or more persons, places, and/or things to collect information and evidence of criminal activities.

**D. ARREST-RELATED ACTIVITIES**

Display or discharge a Departmentally approved firearm to protect self and/or the public.

Display or utilize a Departmentally issued non-firearm weapon (baton, spray) in a defensive manner to control one or more persons in accordance with Department policy.
Search one or more persons for weapons, fruits of a crime, or contraband to effect an arrest, protect oneself and the public, and/or to obtain evidence.
Search a vehicle for weapons, fruits of crime, or contraband to effect an arrest, protect self and the public, and/or to obtain evidence.
Distinguish between felony and misdemeanor classifications when making arrests.
Search a building for individuals, weapons, fruits of a crime, or contraband to effect an arrest, protect self and the public, and/or to obtain evidence.
Physically restrain or subdue a violent or resisting individual or arrestee to protect self, the person being restrained, and the public, or to effect custody of an arrestee.
Determine applicability of Miranda when arresting and detaining suspects.
Signal a felon to stop (e.g., emergency light, siren, P.A.) in order to effect an arrest or contain the felon and await backup.
Make judgments about probable cause for warrantless searches.
Operate a Department vehicle at a high rate of speed, maintaining public safety and in compliance with Departmental pursuit policy, to pursue and apprehend one or more violators.
Determine whether suspects require medical attention.
Physically restrain or control a non-violent individual or arrestee to protect self, the person being restrained, and the public, or to effect custody of an arrestee.
Ensure prisoners are held and detained in compliance with Departmental policy and applicable statutes.
Legally force entry into building to apprehend suspect and/or evidence.
Record the arrest of an individual (e.g., fill out forms, photograph) to document that arrest and possible detention.
Pursue a suspect or violator on foot.
Review computer and/or booking sheet to obtain information about booked suspects (e.g., criminal history, outstanding warrants).
Make recommendations for strip or body cavity search.
Transport person(s) (e.g., witness, victim), maintaining safety, for some official purpose.
<b>E. EVIDENCE/PROPERTY MANAGEMENT</b>
Ensure the secure storage of evidence and property in the designated location.
Ensure the maintenance of chain of custody for evidence.
Release property or evidence to authorized individuals.
<b>F. RECORD AND REPORT MANAGEMENT</b>
Write narrative reports (e.g., incident reports, intelligence reports) providing complete, accurate and consistent information.
Summarize in writing the statements of witnesses and complainants.
Fill in forms requiring specific information accurately and completely.
Record information required by Department guidelines in proper logs.
Document incoming communications (e.g., requests for information, training) and communicate that information to other personnel as necessary.
Maintain logs (written and/or computerized) of activities occurring during the shift (e.g., accidents, significant incidents) to maintain a record.
<b>G. COURT</b>
Appear and testify as a witness in an official proceeding (e.g., traffic court, trial, Civil Service hearing) to assist in fulfilling the Department's role in the judicial and administrative process.
Review search and arrest warrants prior to presentation to judge or prosecutor for

signing.
Review and discuss the details of a specific investigation with prosecutor to plan investigatory strategy, prepare for a court presentation, etc.
Prepare search or arrest warrants.
<b>H. COMMUNITY RELATIONS</b>
Communicate with neighborhood youths to facilitate police-community relationships and deter criminal behavior.
Participate in cooperative operations (e.g., Task Forces, executing warrants) to address community conditions and crime.
Contact the immediate family of an individual (in person) or notify uniformed personnel to provide information to the family concerning that person's injury or death.
Attend meetings (e.g., community meetings, concerned citizens) to discuss and exchange information, address problems, coordinate and develop plans of action, etc.
Provide information upon request to individuals and groups (e.g., business people, neighborhood groups) to increase awareness of potential victimization and deter crime.
Provide assistance and information to civilians seeking help (e.g., directions, explanations of municipal codes and ordinances, referrals to other Department personnel or other agencies/entities).
Maintain current information about available social agencies and their roles for use in referring citizens seeking help.
Discuss police actions with relatives of prisoners or complainants.
<b>I. POLICE DEPARTMENT PROPERTY MANAGEMENT</b>
Clean and inspect weapons.
Conduct inventory of assigned vehicles and equipment to ensure that necessary equipment is available when needed.
Recognize vehicle and/or equipment damage or malfunctions(s) and ensure that necessary repairs are performed.
Maintain clothing and personal equipment to satisfy inspection requirements.
Maintain personal copies of Departmental directives as required by Department policy.
<b>J. DIRECT SUPERVISION</b>
Attend roll call.
<b>K. PERSONNEL EVALUATION AND COUNSELING</b>
<b>L. PERSONNEL ASSIGNMENT AND COORDINATION</b>
<b>M. TRAINING DELIVERY</b>
<b>N. COMMAND</b>
Monitor police activity by radio.
<b>O. INTERNAL/EXTERNAL COMMUNICATIONS &amp; COORDINATION</b>
Notify dispatcher of special conditions that may affect or are affecting sector operations as required by Department procedures.
Communicate with other Department personnel informally to discuss and exchange information (e.g., intelligence), address problems, etc.
Monitor and respond to routine communications (e.g., phone).
Consult with superior to provide/receive assistance with assigned operational activities and keep him/her apprised of potential developments/problems.
Request documents in records systems (e.g., pictures, criminal histories, etc.).
Notify other Police Department units of unusual situations and conditions as necessary and appropriate.
Contact other police Departments and law enforcement agencies (e.g., FBI) for information and assistance.

Communicate with individuals from other city/state/federal agencies/entities to exchange information and accomplish work objectives.
Respond to requests for information from superior personnel.
Answer investigative inquiries from other law enforcement agencies or refer inquiry appropriately.
Contact outside agencies and organizations (e.g., social service agencies) for information.
<b>P. RESEARCH AND PLANNING</b>
<b>Q. FINANCIAL MANAGEMENT</b>
<b>R. PROFESSIONAL DEVELOPMENT</b>
Participate in in-service training and recertification programs including firearms, policies, and practical/tactical exercises (e.g., defensive tactics) to receive information and develop skills.
Read and keep up-to-date on federal, state, and local statutes/ordinances and court decisions to ensure appropriate enforcement and investigatory activities.
Read internal reports and training materials to keep current on procedures and issues.
Read and keep up-to-date on Departmental policies and procedures to ensure appropriate enforcement, investigatory, and administrative activities.
Read outside literature (e.g., texts and journals) to keep current on law enforcement topics.

## VII. MUNICIPAL FIREFIGHTER ESSENTIAL FUNCTIONS

<b>I. EMERGENCY SCENE RESPONSE: HANDS ON</b>
<b>A. INITIAL RESPONSE TO INCIDENTS</b>
Tasks occurring between the receipt of an alarm and initial firefighting or emergency scene activities.
Don protective turnout gear and equipment before and at emergency scenes.
Proceed to assigned apparatus upon receipt of call for service.
Make preliminary evaluation of incident based on alarm information received (e.g., alarm type, structure type, etc.).
<b>B. WATCH DUTIES</b>
Stand watch to receive incoming alarms and information, answers phones, and monitors access to the station house.
Provide alarm communiqué to equipment operators/officers.
Test alarms and dispatch equipment.
Notify station personnel (over public address or through use of signals) of incoming alarms and required response (e.g., everybody goes, truck only, engine only, etc.).
Receive notification of multiple alarms, downtown alarms, and other significant emergencies through the Fire Alarm Office.
Record administrative and general information messages that come in over the computer dispatch.
Answer department and outside phone.
Open and closes fire house doors to allow apparatus or Chief's car to depart/return to house.
<b>C. DRIVING</b>
Drive apparatus to and from, and positions apparatus at, emergency scene.
Drive apparatus safely to designated place.
Select most direct and expeditious route to alarm site.
Maneuver and positions apparatus at incident scene.
Obtain knowledge of most direct and expeditious routes and studies them prior to incident response.
Obtain knowledge of traffic laws and street conditions in order to operate the apparatus safely and expeditiously.
Plan route and position based on anticipated actions (e.g., arrival routes) of other companies when driving to multiple alarm calls.
<b>D. PUMP OPERATIONS</b>
Connect or hooks up apparatus to fire hydrant and operates pumps to supply water in appropriate pressure and volume – using hydrant wrenches, couplings, hoses, spanner wrenches, and other tools.
Engage pumps.
Fill hose with water by hydrant pressure.
Connect and lays feeder line to supply water to fire.
Pump sprinkler system and wet or dry standpipe systems.
Connect suction hose between hydrant and engine.
Monitor control panel (e.g., water temperature, oil pressure gauge, fuel gauge, hydrant pressure).
Pump pre-connect hose-line.
Pump master stream (e.g., aerial ladders).

Hook up to ladder pipe to supply water during aerial ladder operations.
Notify officer of any problems which occur while pumping.
Adjust water pressure (by rule-of-thumb, according to pressure chart, and/or Rules and Regulations) in response to calls for more or less pressure.
Pump using specialty nozzles (e.g. drive-in, cellar distributor).
Implement cold weather procedures (e.g., tank circulation) when necessary.
Maintain pressure by adjusting pressure relief valve or automatic pressure governor.
Transfer from pressure stage to volume stage.
Pump booster lines.
Open and flush hydrant to ensure it is functional.
Shut down pump when ordered to by officer.
Check hydrant for proper drainage.
<b>E. HOSE (AND EXTINGUISHER) OPERATIONS</b>
Stretch line or use extinguisher to deliver water, foam and other extinguishing agents to emergency scene.
Operate nozzle at front of hose line and spray water, foam or other agent onto fire or other hazard, or into involved structure, to extinguish, contain and/or control incident.
Locate seat of fire or other hazard (e.g., gas leak) by observing, smelling or listening for smoke, sound, flames, gas, vapors, etc.
Advance or assist in advancing hose to seat of fire or other hazard.
Disconnect hose from bed and attach to discharge gate.
Determine type (size) and number of lengths of hose needed for operation.
Connect to standpipe during high rise incident command.
Connect hose lines to nozzle(s).
Use extinguisher to extinguish, contain and/or control incident.
Select type of extinguisher (e.g., foam, dry-chemical, etc.) needed for incident.
Feed hose line to other fire personnel.
Determine proper nozzle and nozzle setting.
Operate stang on tower ladder to apply water to structures on fire.
Pull hose off hose bed.
Flake out or dekind hose line prior to charging or during extinguishment to ensure proper operation.
<b>F. MECHANICAL LADDER OPERATIONS</b>
Stabilize ladder truck and elevate and operate aerial ladders and platforms in order to rescue victims, provide access for ventilation, operate master stream devices, etc.
Climb mechanical ladders to perform search, rescue and other operations.
Operate ladder from ground controls or from platform controls, while watching for power lines, trees and other overhead obstructions.
Elevate, rotate and extend aerial or tower ladder for supported and unsupported operation, while watching for power lines, trees and other overhead obstructions.
Stabilize elevating apparatus using wheel chocks, stabilizing pads, stabilizing jacks and outriggers.
Operate and direct ladder pipe to supply water during aerial ladder operations.
<b>G. MANUAL LADDER OPERATIONS</b>
Carry, raise, extends and climbs manual ladders to perform search, rescue and other operations.
Extend manual (extension) ladders to reach victims.
Climb manual ladder to perform search, rescue, and other operations.
Determine proper placement of manual ladder at scene.
Determine manual ladder type and size needed at incident scene.
Anchor and secure manual ladder (i.e., tying off) at scene.



Raise and position manual ladder at incident scene.
Carry manual ladder from apparatus to incident scene.
Return manual ladder to apparatus.
<b>H. FORCIBLE ENTRY</b>
Pry open, cut, or break down doors, or otherwise enters structures, vehicles, aircraft and other entrapments in order to search for and rescue victims and provide access to the emergency scene – using axes, halligan tools, etc.
Gain entry into structures using axes, sledge hammers, battering rams, halligan tool and other forcible entry tools.
Cut through surfaces using power saws and other power tools.
Determine best location for forcible entry.
Pry open doors in structures using pry bars, halligan tools, bolt cutters and other tools.
Remove locks or hinges from doors using sledgehammers, battering rams, axes or other forcible entry tools.
Break holes in wooden, brick and masonry walls using sledge hammers, battering rams, axes and other tools.
<b>I. VENTILATION</b>
Open or break windows, chop or cut holes in roofs, breaches walls or doors, and hangs fans in windows or doors to remove heat, smoke and/or gas from structures or entrapments.
Determine best location for venting structure based on location of hazard and fire personnel, roof type, and building construction.
Break windows and other points of entry using axes, ladders and other tools, to ventilate structure.
Cut open walls, roof and other structures to ventilate structure.
Open windows and other points of entry manually or by using pry bars, halligan tools, and other tools, to ventilate structure.
Hang fans from ladders and in doors, windows, and holes in roofs or walls.
Use fans for positive pressure.
<b>J. SEARCH</b>
Search assigned area in order to locate victims and to obtain further information about incident, following standard search procedures.
Search floor or area of fire, or other hazard, for conscious and unconscious victims, sweeping assigned search area with arms, legs or tools.
Search floors above and below fire, or other hazard, including stairwells and bulkheads, for inhabitants who need to be moved or rescued.
View perimeter of the building to determine if there are victims needing assistance at windows, on ledges, or who have jumped.
Identify hazardous conditions in course of search and informs others of the problem.
Determine search procedure or strategy needed to accomplish objectives.
Search structures for seat of fire, or other hazard, and extensions.
<b>K. RESCUE</b>
Assist, hoist, carry or drag victims from emergency area by means of interior access (stairs, hallways, etc.) or, if necessary, by ladders, fire escapes, platforms, or other means of escape – using rescue harnesses, ropes, etc.
Rescue drowning victims using life-saving techniques.
Conduct water rescues (i.e., river rescue, using boats) in accordance with established guidelines.
Evacuate persons from incident scene due to risk of fire, explosion, exposure to hazardous chemicals, etc.
Move heavy objects and obstructions in order to free or gain access to trapped victims or

bodies, using air bags, chains and hoists, jacks, shoring materials, hurst tools and other hydraulic tools.
Drag or carries victims from emergency scenes.
Hoist or lowers victims or fire personnel using ropes, knots and rescue harnesses.
Pry, break or cut structures, vehicles, and/or aircraft to free victims involved in accidents, cave-ins, collapsed buildings or other entrapments -- using door openers, jaws, axes and other manual and mechanical equipment.
Instruct persons on upper floors as to appropriate actions (e.g., staying put, ascending to upper floors, descending to lower floors via fire escapes, etc.).
Dig to free victims trapped in tunnels, pipes, excavations, cave-ins or other entrapments using shovels, picks, spades and other equipment.
Place victims onto stretchers, backboards, stokes, etc.
<b>L. SALVAGE</b>
Move and cover furniture, appliances, merchandise and other property; covers holes in structures; stabilizes damaged structural components; and redirects or cleans up water in order to minimize damage -- using plastic and canvas covers, etc.
Tear down or shore up weak and dangerous structural components (e.g, floors, walls, roofs, overhangs and stairs) using hooks, axes, saws and other tools.
Spread salvage covers over property.
Protect the integrity of the incident scene, while performing salvage operations, in case of suspected arson.
Move furniture and other objects to protect from water or other damage.
Remove water from floors using brooms, squeegees, mops, water chutes, catchalls and pumps.
<b>M. OVERHAUL</b>
Open up walls and ceilings, cuts or pulls up floors and moves or turns over debris, in order to check for hidden fires which could rekindle or spread using hooks, axes, saws and pitchforks.
Open ceilings, walls, etc., to expose hot spots and other hazardous conditions with axes, pike poles, etc.
Search for and extinguish any hidden fires by looking, feeling or smelling for fire and smoke.
Check and search open areas, walls, open structures for fire extension.
Remove and neutralize or dispose of flammable or hazardous materials from buildings.
Remove and extinguish burned or smoldering debris from buildings.
Determine whether a smoke detector was present and functional.
<b>N. CLEAN-UP/PICK UP</b>
Pick up, clean and return equipment to vehicle and rolls or folds hose, so that the company can go back in service.
Control and clean up the Fire Department's medical waste products.
Clean and return all tools, equipment, supplies and property in usable condition to appropriate vehicles.
Shut down and drain lines at pumps.
Determine that all hoses used during response to incident are present and accounted for.
Clean hoses using hose washers or brooms and brushes.
Back lines out of structures.
Roll and fold hoses after use and returns them to appropriate vehicle.
Clean the apparatus.
<b>O. FIRST AID</b>
Provide direct medical assistance to persons requiring emergency attention or assists others in providing medical assistance.

Administer CPR if necessary.
Determine priority of emergency medical treatment for victims.
Administer first aid other than CPR.
Operate oxygen and other medical equipment.
Assist EMS personnel in administering medical treatment.
<b>II. STATION DUTIES AND MAINTENANCE</b>
<b>P. EQUIPMENT MAINTENANCE</b>
Check, clean, and maintain personal gear and equipment to ensure proper and safe operation.
Check Self Contained Breathing Apparatus for proper operation and adequate air pressure.
Check medical equipment.
Check turnout gear for safety and structural integrity.
Check the condition of generators, blowers, lights, cords and fans.
Check and maintains power equipment.
Place turnout gear on or near apparatus.
Check extension ladders.
Check hose on apparatus (proper bedding and amount).
Check and perform ordinary maintenance on other portable equipment (e.g., checks oil levels, greases, etc.).
Clean, reload, and test hoses.
Recommend that officer call for repairs on equipment.
Perform annual hose tests.
Inventory and perform regular maintenance on hand tools (e.g., paints, oils or stencils hand tools).
Change over equipment and supplies from one apparatus to another.
Paint other equipment as needed.
<b>Q. APPARATUS MAINTENANCE</b>
Check, clean, and maintain apparatus to ensure proper and safe operation.
Check ability of engine to pump water.
Check engine pumper pressure.
Check the aerial ladder sections, outriggers.
Recommend to officer that apparatus be kept out of service due to mechanical problems.
Perform normal daily apparatus check (e.g., oil, fuel & water levels; proper pressures and lubrications; batteries; lights; sirens; brakes; tires; etc.).
Recommend that officer call for repairs on apparatus.
Perform normal weekly apparatus check (e.g., hydraulic fluid levels).
Equip apparatus with traction devices (e.g., chains) as necessary.
Notify officer of electrical or mechanical problems on apparatus.
Check with Equipment Operator coming off duty regarding condition of apparatus.
Perform annual pump test.
Clean motor and pump on apparatus.
<b>R. FACILITY MAINTENANCE</b>
Check, clean, and maintain house facilities. This includes the performance, or assignment, of routine housekeeping chores.
<b>III. FIRE PREVENTION AND INVESTIGATION</b>
<b>S. INSPECTION OF BUILDINGS &amp; FIRE PROTECTION DEVICES</b>
Inspect buildings for fire prevention/hazardous materials code violations or hazards on a periodic basis or during the course of their activities. Inspects alarms, hydrants, sprinkler systems, etc.
Recognize code violations (e.g., blocked exits, improper storage of chemicals, etc.).

Inspect buildings for code compliance.
Conduct inspections of schools.
Inspect buildings upon request of occupants/owners.
Conduct on-site inspections of fire protection devices (e.g., hydrants, alarms, sprinkler systems, etc.).
<b>T. PRE-FIRE PLANNING</b>
Review or prepare plans in order to provide information regarding hydrant locations, exposures, hazardous materials and other areas or situations of high risk.
Conduct site surveys in district.
Tour buildings in order to identify or verify the presence of an unusual fire hazard or situation.
Recognize a target hazard (e.g., a new high-rise or a building with hazardous materials) that may warrant the development of a pre-fire plan.
Conduct familiarity inspections in district.
Familiarize self with layout of first and second alarm districts.
<b>U. INVESTIGATIONS</b>
Examine incident scene, conducts interviews, collects and preserves evidence, and reviews forms and reports to help determine the cause of a fire or other emergency.
Respond to incidents of suspicious or undetermined origin.
Observe fireground conditions to detect possible arson.
<b>IV. PUBLIC AND COMMUNITY RELATIONS</b>
<b>V. PUBLIC RELATIONS</b>
Engage in activities which have an impact on the department's image in the community. Such activities include providing information to the media, providing assistance and support to civilians seeking help or information, etc.
Deal with distressed individuals at emergency scene.
Meet civilians in the fire station, conducts tours and provides information.
Make public presentations and conducts demonstrations of apparatus and equipment on behalf of the Fire Department.
<b>W. PUBLIC TRAINING &amp; EDUCATION</b>
Oversee, develop, conduct and/or evaluate fire prevention and other educational programs for members of the public.
<b>X. AUDIO-VISUAL PRODUCTION</b>
Operate audio-visual equipment and develop and produce audio-visual materials for internal use or for public broadcasting.
<b>V. PROFESSIONAL DEVELOPMENT</b>
Participate in training drills and classes to enhance job-related skills and abilities. Reads internal memos and bulletins to keep apprised of new developments in departmental operations and procedures.
Maintain knowledge of chemicals and other hazardous materials.
Maintain knowledge of building structures related to fire control.
Attend specialized training sessions (e.g., CPR certification, special schools (e.g., Foam, ICS), etc.).
Attend routine training drills and sessions.
Maintain knowledge of latest firefighting equipment and techniques.
Attend "live-incident" training drills.
Attend external seminars/workshops and college courses to be aware of current developments in the fire service.
Observe training videotapes.
Participate in external agencies and societies (e.g., NFPA).
Act as a superior officer.

Receive training in superior's work activities.
Review internal Massachusetts Fire Department bulletins, memos, etc., to remain aware of departmental updates.
Read professional journals and publications (e.g., Fire Command) to be aware of current developments in the fire service.
<b>Z. OTHER DUTIES</b>
Carry hose, tools and other equipment to and from emergency scenes.
Operate generator to supply electricity to the emergency scene.
Set up electrical cords and lights.
Serve on special project committees to which he/she is assigned (e.g., Awards Committee, Hydrant Inspection, etc.).

**VIII. Linkage of PAT Events with Essential Tasks from the Job Task Analysis  
Development & Administration of the Police & Physical Ability Tests for the Commonwealth of  
Massachusetts**

**Police Events**

**Physical Abilities Test**

**Event 1: Getting to the Problem**

**A. Obstacle Run**

Essential Job Functions (from surveys):

Pursue a suspect or violator on foot

**B. Take-down**

Essential Job Functions (from surveys):

Physically restrain or control a non-violent individual

Physically restrain or subdue a violent or resisting individual

**C. Handcuffing**

Essential Job Functions (from surveys):

Effect an arrest, protect oneself and the public

Participate in in-service training including tactical exercises

**Event 2. Resolving the Problem (Trigger Pull)**

Essential Job Functions (from surveys):

Display and discharge a departmentally approved firearm

Participate in in-service training including firearms

**Event 3. Resolving the Problem (Separation Event)**

Essential Job Functions (from surveys):

Appraise the situation, separate individuals

Separate individuals in a fight or disturbance

**Event 4: Removing the Problem (Dummy Drag)**

Essential Job Functions (from surveys):

Administer immediate care to victim to prevent further injury, trauma, or death

## **Linkage of PAT Events with Underlying Physiological Requirements**

### **Fire Fighter Events**

#### **Physical Abilities Test**

##### **Event 1: Stair Climb**

Physiological demands are placed on the cardiovascular and respiratory systems. These demands include:

- increased demand on the lungs to facilitate a greater respiratory rate
- increased exchange of oxygen and carbon dioxide between the blood and alveoli in the lung
- increased transport of oxygen and carbon dioxide in the blood
- more blood pumped through the body from the heart to the lungs and skeletal muscles
- increased exchange of oxygen and carbon dioxide from the blood to the active skeletal musculature
- increased generation of energy in the form of adenosine triphosphate (ATP) in the muscle cells
- greater demand for removal and buffering of hydrogen ions generated during the production and utilization of energy in the muscle
- greater need to maintain thermal balance through decreased vasoconstriction and increased vasodilation of sweat glands in the skin resulting in an increased sweating rate

Activation of the skeletal system to generate muscular strength and endurance, which requires:

- contraction of the abdominal muscles (rectus abdominous, external obliques, internal obliques, serratus and erector spinae)
- contraction of the lower body and leg muscles (adductor longus, rectus femoris, vastus lateralis, vastus medialis, soleus, gastrocnemius, semitendinosus, semimembranosus, biceps femoris, gluteus maximus, gluteus medius)
- generation of ATP to facilitate muscle contraction and force generation
- removal and buffering of hydrogen ions generated during the production and utilization of energy in the contracting muscle

##### **Event 2: Ladder Event**

Physiological demands are placed on the cardiovascular and respiratory systems, which include:

- increased demand on the lungs to facilitate a greater respiratory rate
- increased exchange of oxygen and carbon dioxide between the blood and alveoli in the lung
- increased transport of oxygen and carbon dioxide in the blood
- more blood pumped through the body from the heart to the lungs and skeletal muscles
- increased exchange of oxygen and carbon dioxide from the blood to the active skeletal musculature
- increased generation of energy in the form of ATP in the muscle cells
- greater demand for removal and buffering of hydrogen ions generated during the production and utilization of energy in the muscle
- greater need to maintain thermal balance through decreased vasoconstriction and increased vasodilation of sweat glands in the skin resulting in an increased sweating

rate

Physiological requirements also include muscular strength, anaerobic power and flexibility, which require:

- primarily contraction of the lower body and leg muscles (adductor longus, rectus femoris, vastus lateralis, vastus medialis, soleus, gastrocnemius, semitendinosus, semimembranosus, biceps femoris, gluteus maximus, gluteus medius)
- generation of ATP to facilitate muscle contraction and force generation
- buffering and removal of hydrogen ions generated during the production and utilization of energy in the contracting muscle
- ability of joints and muscles of the legs, back, and trunk to complete the required range of motion

### **Event 3: Hose Advance**

Physiological requirements include muscular strength, anaerobic power, muscular endurance and flexibility, which require:

- the muscle cells to respond to neural impulses in the form of action potentials that signal the proteins in the muscle cell to interact and generate force
- requires the muscle cells to generate energy for contraction from stored ATP and phosphocreatine and through conversion of glycogen to lactate in the muscle cell
- requires the muscles and blood to buffer the increased acidity (lactic acid and hydrogen ions) resulting from muscle work
- requires the joints and muscles of the legs, back, and trunk to complete the required range of motion

### **Event 4. Forcible Entry**

Physiological requirements primarily include muscular strength and coordination and require:

- the muscle cells to respond to neural impulses in the form of action potentials that signal the proteins in the muscle cell to interact and generate force
- the muscle cells to generate energy for contraction from stored ATP and phosphocreatine and through conversion of glycogen to lactate in the muscle cell
- the muscles and blood to buffer the increased acidity (lactic acid and hydrogen ions) resulting from muscle work
- the muscles of the chest, back, and arms (deltoid, pectoralis major, supraspinatus, latissimus dorsi, teres major, biceps brachii, brachialis, triceps brachii and brachioradialis) to generate force
- sensory input from the cerebellum and upper brain to coordinate the physical action and neural generation of a signal for muscle contraction.

### **Event 5: Search**

Physiological requirements include muscle flexibility, proprioception and kinesthetic sense, which require:

- the joints and muscles of the legs, back, and trunk to complete the required range of motion
- requires input from the motor cortex, corticospinal tract and brain stem to control reticular and vestibular movement

### **Event 6: Rescue**



Physiological requirements include muscular strength, anaerobic power, muscular endurance and flexibility, which require:

- the muscle cells to respond to neural impulses in the form of action potentials that signal the proteins in the muscle cell to interact and generate force
- the muscle cells to generate energy for contraction from stored ATP and phosphocreatine and through conversion of glycogen to lactate in the muscle cell
- the muscles and blood to buffer the increased acidity (lactic acid and hydrogen ions) resulting from muscle work
- the joints and muscles of the legs, back, and trunk to complete the required range of motion

### **Event 7: Ceiling Hook (Pike Pole)**

Physiological requirements include muscular strength, anaerobic power, muscular endurance and flexibility, which require:

- the muscle cells to generate energy for contraction through stored ATP and phosphocreatine and through conversion of glycogen to lactate in the muscle cell
- the muscles and blood to buffer the increased acidity (lactic acid and hydrogen ions) resulting from muscle work
- the joints and muscles of the legs, back, arms, hands and trunk to complete the required range of motion

## Linkage of PAT Events with Essential Tasks from the Job Task Analysis

### Fire Fighter Events

#### Physical Abilities Test

##### Event 1: Stair Climb

Essential Job Functions (from surveys):

- Lays feeder line
- Advances or assists in advancing hose to seat of fire or other hazard
- Carries hose to and from emergency scenes
- Searches (multi-floor) structure for seat of fire, or other hazards
- Searches floors above and below fire, or other hazard, including stairwells and bulkheads, for inhabitants who need to be moved or rescued

##### Event 2: Ladder Event

Essential Job Functions (from surveys):

- Extends manual extension ladders to reach victims
- Places ladder at scene
- Raises and positions manual ladder at scene
- Carries manual ladder from apparatus to incident scene
- Returns manual ladder to apparatus

##### Event 3: Hose Advance

Essential Job Functions (from surveys):

- Lays feeder line from supply water to fire
- Advances or assists in advancing hose to seat of fire or other hazard
- Pulls hose off hose bed
- Carries hose to and from emergency scenes

##### Event 4. Forcible Entry

Essential Job Functions (from surveys):

- Gains entry into structures using axes, sledge hammers, etc.
- Breaks holes in wooden, brick, and masonry walls using sledge hammers

##### Event 5: Search

Essential Job Functions (from surveys):

- Searches floor or area of fire for victims
- Searches floors above and below fire for inhabitants who need to be moved

##### Event 6: Rescue

Essential Job Functions (from surveys):

Commonwealth of Massachusetts Initial Hire Medical Standards 2014

Evacuates persons from incident scene due to risk  
Drags or carries victims from emergency scenes

**Event 7: Ceiling Hook (Pike Pole)**

Essential Job Functions (from surveys):

Tears down weak and dangerous structural components  
Opens ceilings, walls, etc. to expose hot spots and other hazardous conditions

## **IX. Physical Fitness Standards Test Course for Police Officers/Physical Ability Test (PAT) Events**

- (1) The Physical Fitness Standards Test for Police Officer consists of four (4) events that require candidates to perform simulations of activities that are a part of the police officer's job. These events require cardiovascular fitness, muscle strength, muscular endurance and flexibility. Each event will be timed. During all events, the candidate will wear a duty belt equipped with a holster, plastic gun and night stick to simulate the equipment a police officer normally wears during these types of activities. The events are described below. They will be performed in the order listed. There will be a twenty second rest period between events.
- (a) Event #1: "Getting to a Problem" - The Obstacle Course.  
This event simulates the actions necessary to pursue and "takedown" a suspect. The event begins with a 340-yard obstacle course where the candidate will be faced with climbing under an obstacle, climbing up and down steps, going through an open window, climbing over a wall and negotiating a series of cones arranged in a zigzag pattern. At the end of the course, the candidate will be required to grab hold of a weighted bag attached to a pulley and touch it to the ground beyond a three (3) foot line. The candidate will then immediately move around the Power Station to the handcuffing simulation where he/she will be required to pull on two hand levers until the cable hits the stop. This completes the event.
- (b) Event #2 "Resolving the Problem" - The Trigger Pull Event. The event consists of raising a handgun and squeezing the trigger six (6) times with each hand.
- (c) Event #3: "Resolving the Problem" - The Separation Event. This event simulates tasks that require separating one party from another and controlling individuals, such as in crowd control situations. The candidate will be required to pull a hanging bag, weighted against 75 lbs., backwards touching it to the ground across a marked line. Each candidate will have to perform two "pulls".
- (d) Event #4: "Removing the Problem" - The Dummy Drag. This event simulates dragging a victim or suspect. The candidate will be required to drag a 6', 145 pound dummy over a straight 25 foot course.

Specifications for these test events are on file at HRD.

## Scoring of the Physical Fitness Standards Test Course for Police Officers

- (1) The scoring will be as follows:

TABLE OF CUT SCORES	
Obstacle Course	130.4 seconds
Trigger Pull	7.1 seconds
Bag Pull	14.2 seconds
Dummy Drag	11 seconds

- (2) In order to pass the Physical Fitness Standards Test successfully, a candidate must pass every sub-test by achieving at least the passing score indicated on the preceding chart. If upon examination, a candidate does not pass the test, then that candidate will be required to retake the entire test (all the sub-tests) during the re-examination.

## **X. Physical Fitness Standards Test Course for Fire Fighters/ Physical Ability Test (PAT) Events**

(1) General Description The Physical Fitness Standards Test for Fire Fighter consists of 7 events that require each candidate to perform simulations of activities that are part of the fire fighter's job. These events require cardiovascular fitness, muscle strength, muscular endurance and flexibility. Each event will be timed. During all events, the candidate will wear a weighted vest which approximates the weight of the clothing, equipment and breathing apparatus that a fire fighter normally wears during these types of activities. The events are described below. They will be performed in the order listed.

(a) Stair Climb This event simulates continuous stair climbing, an activity that fire fighters may perform when getting to a fire at an incident scene. For this event, the candidate will be required to step on a rotating stair case (also known as a stepmill) at a pre-determined stepping pace for a specific period of time. There is a five minute rest period after the stair climb event.

(b) Ladder Event This event simulates various activities related to using extension ladders. The candidate will be required to remove a ladder from a rack, carry it some distance, raise a weight of approximately 45 lbs. attached to a rope that simulates the raising of an extension ladder, lower that weight and return the ladder to the rack from which it was taken. The event ends when the ladder is back in the rack. This event will be timed.

(c) Hose Advance This event simulates the actions necessary to manipulate a fully charged fire hose. The candidate will be required to pull 50 feet of hose through a U-shaped course with several turns. There will be a ceiling on the U-shaped course to prevent the candidate from standing upright. This event will be timed.

(d) Forcible Entry This event simulates breaking down a door to gain entry to a burning structure or an incident scene. For this event the candidate will be required to strike a rubber pad mounted on a moveable post. The candidate will use a 12 lb. sledge hammer to move the post a set distance. The post and structure are weighted to simulate the force one would need to exert on a door in order to gain entrance. The candidate's score will be based on the time it takes to move the post the required distance.

(e) Search This event simulates the actions necessary to enter and search a smoke-filled structure. Candidates crawl through a dark wooden tunnel with obstructions and turns. The tunnel is approximately 65 feet long. The tunnel is 4 feet high and 4 feet wide. At one location in the tunnel there is an obstacle on the floor and at one location there is an obstacle from the ceiling. In addition, at two locations, the tunnel is reduced from 4 feet to 3 feet in width. This event will be timed.

(f) Rescue Through a Doorway This event simulates the actions necessary to drag an unconscious victim through a doorway to get the victim to safety. Individuals drag a 125 pound dummy approximately 60 feet along a zigzag course to a designated area at the end of the course. In this event, there is a low ceiling over the course to prevent candidates from standing upright. This event will be timed.

(g) Ceiling Hook (Pike Pole) This event simulates the use of a pike pole or ceiling hook. A pike pole or ceiling hook is a fire fighting tool used to tear down ceilings or open walls while looking for hidden fires. This event requires the candidate to take a pike pole, tipped with an industrial hammer head, and thrust it upward at a metal plate in an 8 foot ceiling. The metal plate weighs approximately 60 lbs. and must be lifted six inches in order for the strike to count. The candidate then steps over to the next part of the event, where a pike pole handle is suspended from a ceiling height. The pole is attached to a counter balance that weighs approximately 80 lbs. The candidate must pull the pole down six inches in order for the pull to count. The candidate must perform one push and five pulls in

a sequence. The event will require the candidate to perform four one-minute periods of work, in which he/she will try to do as many push-pull sequences as possible. Only completed sequences will count in the scoring of this event. Each work period will be followed by a 30 second rest period.

- (2) Specifications for these test events are on file at HRD.

### **Scoring of the Physical Fitness Standards Test Course for Fire Fighters**

- (1) The scoring will be as follows:

<b>TABLE OF CUT SCORES</b>	
Stepmill	200 seconds
Ladder	35.56 seconds
Hose Advance	20 seconds
Forcible Entry	13.91 seconds
Search	39 seconds
Rescue	36 seconds
Ceiling Hook	25 repetitions

- (2) In order to pass the Physical Fitness Standards Test successfully, a candidate must pass every sub-test by achieving at least the passing score indicated on the above chart. If upon examination, a candidate does not pass the test, then that candidate will be required to retake the entire test (all the sub-tests) during the re-examination.

## **Attachment A: Diabetes Mellitus**



A candidate with Diabetes Mellitus (diabetes) must comply with the requirements described below. At their own expense, the candidate or officer must submit medical information from their treating medical provider responsive to these criteria, including actual medical data which can be reviewed by the Police Physician. These criteria apply to all cases of diabetes, independent of whether insulin is required or not. The requirements pertaining explicitly to insulin do not apply to individuals whose diabetes is being managed without insulin.

The medical information must cover the following:

1. Care: The individual is under the care of an endocrinologist or other physician knowledgeable about diabetes management. Outpatient and in-patient medical record(s) of the last three years or since date of diagnosis (whichever is shorter) should be reviewed by the treating physician and provided to the Police Physician.

2. Treatment: The method of treatment of diabetes

A. If the individual has type 1 diabetes, the individual has been on a basal/bolus regimen or an insulin pump using analogue insulins for the six (6) months prior to evaluation.

If the individual uses an insulin pump, documentation is needed as follows:

1. proper understanding and education in the use of the insulin pump
2. start date for the use of the pump
3. history of insulin site infections
4. history of pump cessation and pump malfunction
5. backup plan for pump malfunction including use of injectable insulin
6. frequency of infusion set changes

B. If has type 2 diabetes on insulin, the individual has been on a stable medication regimen for the three (3) months prior to evaluation.

C. If on oral agents alone, the individual has been on a stable medication regimen for the month prior to evaluation.

3. Education: The individual has been educated in diabetes and its management and thoroughly informed of and understands the procedures that must be followed to monitor and manage his/her diabetes and what procedures should be followed if complications arise.

4. Quantitative Glucose Monitoring

A. The individual has documentation of ongoing self-monitoring of blood glucose.

B. This must be done with a glucose meter that stores every reading, records date and time of reading and from which data can be downloaded.

C. Monitoring logs must be available covering the time period (1, 3 or 6 months) described in sections 2.A. – C. The frequency of glucose monitoring must follow a schedule acceptable to the Police Physician in consultation with the treating physician.

D. Has had hemoglobin A1C measured at least four times a year (intervals of two to three months) over the last 12 months prior to evaluation if diagnosis has been present over a year. If hemoglobin A1C > 8%, this may signal a problem with diabetes management that warrants further assessment.

5. Incapacitating events

- A. Has not had any episodes within the past one (1) year,  
**and**
- B. no more than two (2) episodes in the past three (3) years,  
**or**
- C. since diagnosis of diabetes (if less than one year) has not had any episodes of:
  - 1. severe hypoglycemia (loss of consciousness, seizures or coma, requiring the assistance of others or needing urgent treatment [glucagon injection/IV glucose]) or
  - 2. blood sugar < 60 mg/dl with unawareness demonstrated in current glucose logs.

6. Chronic complication screening: Chronic complications of diabetes are associated with increased risk for severe hypoglycemic episodes and warrant further assessment. The components of screening for chronic complications are:

- A. complete eye exam by a qualified ophthalmologist or optometrist, including a dilated retinal exam, demonstrating no more than mild background diabetic retinopathy.
- B. Normal vibratory testing with a 128 Hz tuning fork, has normal testing with 10 gram Semmes-Weinstein monofilament and normal orthostatic blood pressure and pulse testing.
- C. Normal cardiac physical exam. Cardiac stress testing to at least 12 METS is recommended and should begin based on either the criteria of the American Heart Association / American College of Cardiology or those of the American Diabetes Association. Individuals with diabetes who have a normal cardiac stress test will be retested every one to three years based on individual clinical assessment. This assessment should consider:
  - the age of the individual
  - the number and persistence of CAD risk factors
  - the severity of CAD risk factors
- D. Microalbumin/creatinine ratio <30:1, measured or calculated creatinine clearance > 60 ml/min.

7. Ongoing evaluation and requirements:

- A. Should have medical records and glucose meter logs reviewed periodically. Because of the nature of diabetes it is important that regular medical follow up be provided to the individual. The frequency and content of the evaluation should be determined on an individual basis by the Police Physician in consultation with the treating physician.
- B. Must advise Police Physician of any change in type of medication.
- C. Must advise Police Physician of any episodes of significant hypoglycemia or hyperglycemia (ketoacidosis, hyperosmolar hyperglycemic nonketotic state).
- D. Must provide documentation of ongoing evaluation of cardiac, ophthalmological, neurological and/or renal status. [see sections above]

The diabetes requirements above are adopted from the National Consensus Guideline for the Medical Evaluation of Law Enforcement Officers (2007), issued by the American College of Occupational and Environmental Medicine in consultation with the American Diabetes Association. The full document (soon to be available from ACOEM.org) should be consulted for additional details regarding recommended evaluation and monitoring.

[www.acoem.org](http://www.acoem.org).

## **Appendix B: Medical Examination Form**

# COMMONWEALTH OF MASSACHUSETTS

## HUMAN RESOURCES DIVISION

### MEDICAL EXAMINATION FORM

### INITIAL-HIRE MEDICAL STANDARDS

This form is to be used for all medical examinations performed pursuant to the Medical and Physical Fitness Standards Regulations for Public Safety Personnel. Communities not subject to these regulations may also use this examination form.

#### A. Completed by Municipality (type or print in ink)

Name of Examinee (Last, First, Middle) \_\_\_\_\_

Municipality: \_\_\_\_\_ Social Security # \_\_\_\_\_ Date of Birth \_\_\_\_\_

Appointing Authority Email: \_\_\_\_\_ Dept. Chief Email: \_\_\_\_\_

Position: ☐ Police Officer ☐ Firefighter

☐ Initial Exam ☐ Other Exam (Please explain) \_\_\_\_\_

#### B. Privacy Notice

The collection of the information on this form is authorized under regulations filed with the Secretary of State of the Commonwealth of Massachusetts. This information will be used to determine the fitness-for-duty of public safety personnel. The information may be disclosed to the Municipal Keeper of the Records; an appropriate government agency for law enforcement purposes; where relevant in a legal or administrative proceeding to which the Commonwealth or a Commonwealth municipality is a party or has interest; to a government agency upon its request when relevant to its decision concerning employment or other benefits; to an expert consultant or other person under contract with the Commonwealth of Massachusetts to fulfill an official agency function including audits of services provided under these Medical Standards; to an investigator, administrative judge, or complaints examiner appointed for the investigation of a formal complaint of employment discrimination; to officials with responsibility for administering workers' compensation, disability retirement, and other benefit entitlements; to an examinee's private treating physician; and to medical personnel retained by the Commonwealth of Massachusetts to provide medical services in connection with an employee's health or physical condition related to employment. Completion of this form is voluntary. If this information is not completed, the examination may be considered incomplete. ***Knowingly providing false or incomplete answers may result in the rescission of a conditional job offer or dismissal if discovered at a later time.***

#### C. Consent and Certification (Completed by Examinee)

I hereby authorize collection and use of the information on this form for the purposes stated in the above Privacy Notice. I have read and understand the provisions of the Privacy Notice included in this form. I certify that all the information given by me in connection with this examination will be correct and complete to the best of my knowledge and belief.

*I also understand that if I fail an initial medical examination, I may undergo a reexamination within 16 weeks of the date of the failure of the initial examination. If I fail to pass the reexamination, my appointment can be rescinded. (M.G.L. Chapter 31, Section 61A.)*

Signature of Examinee \_\_\_\_\_ Date \_\_\_\_\_

It is mandatory that a **signed copy** of this cover page, and a copy of the Medical Verification Section (page 6) be returned by e-mail to [PAT@state.ma.us](mailto:PAT@state.ma.us) or mailed to the Human Resources Division (HRD), Civil Service Unit, Room 301, at One Ashburton Place, Boston, MA 02108.

## **D. General Instructions for Examining Physicians**

All health care providers who perform initial hire medical examinations for police officers and fire fighters must read, understand, and apply the current Medical Standards approved by the Human Resources Division (HRD) of the Commonwealth of Massachusetts. The purpose of this examination is to determine if the candidate is medically qualified to perform the essential job functions for the position of police officer or fire fighter. This form is designed to facilitate application of these Medical Standards, but it is not a substitute for the applicable Medical Standards. The Medical Standards for police officers and fire fighters are included in the Physician's Guide, which is distributed by HRD, One Ashburton Place, Boston, MA 02108. Information regarding the application and interpretation of these Medical Standards may be obtained by contacting HRD by telephone at (617) 727-3777 or by e-mail at [PAT@state.ma.us](mailto:PAT@state.ma.us).

If the cover page, which includes the candidate's Certification and Consent, and Section E, Medical History, are not already completed, the examinee should be advised to complete these sections before the examination begins so that the examiner can review the medical history with the examinee to clarify any incomplete or uncertain information. Any relevant additional information obtained by the examiner must be clearly documented in Section H, the section in which the examiner should provide any additional notes regarding the medical examination.

Each examinee must receive a comprehensive medical examination, which includes all systems necessary to ensure that he or she meets the applicable Medical Standards. This examination should be inclusive of, but not limited to, all items listed under Section F, Medical Examination. Breast, rectal and prostate examinations are required only if clinically indicated. Any abnormal findings should be documented in sufficient detail to support the fitness recommendations of the examiner based upon the history, examination, and test results. A doctor of medicine or osteopathy, a nurse practitioner, or a physician's assistant may perform the examination. If the examination is performed by a nurse practitioner or physician's assistant, a doctor of medicine or osteopathy must review the entire examination file and complete the Medical Verification Section.

All diagnostic and laboratory tests required under the Medical Standards must be performed and documented in Section G, Laboratory and Diagnostic Tests. Any abnormal results should be detailed in Section H, Additional Notes, and copies of the complete test reports attached. Determination of whether a candidate has passed the medical examination should be deferred until all test results are received and reviewed by the examining physician.

If the examination has been completed and the physician still is uncertain regarding whether a medical issue is likely to prevent the candidate from being able to "safely and effectively" perform the essential job activities, additional information may need to be obtained. The examinee should then be afforded an opportunity to submit medical records or any other relevant information from his or her personal physician or a medical specialist. The examining physician should advise the examinee regarding any information that would be necessary or useful to assess his or her fitness (e.g. the report of an exercise tolerance test performed by a board certified cardiologist). Any costs incurred in obtaining such information are the responsibility of the examinee.

When the examining physician has compiled and reviewed all relevant information regarding the examinee's health, the Medical Verification Section should be sent to the appointing authority (for initial Standards examinations), with a copy to HRD. The Medical Verification Section provides a means of communicating relevant information regarding the examinee's ability to safely and efficiently perform the essential functions of the public safety position based upon the applicable Medical Standards. Detailed medical information should not be disclosed on this form. In the event the examinee fails to pass the examination, only the relevant section of the applicable Medical Standards should be referenced on the form. Medical examination records are the property of the appointing authority. They must be kept accessible for the duration of the examining physician's contract for use in the event of an audit, appeal or disability proceeding. If the contract terminates or expires, the physician will be instructed to transfer these records to his or her successor. The physician, however, may retain copies of his or her examination reports.

The Human Resources Division performs routine audits of examinations performed pursuant to the Medical and Physical Fitness Standards Regulations for Municipal Public Safety Personnel in order to assess the effectiveness of the examination process. Health care professionals under contract to the Human Resources Division periodically review representative samples of examination reports. The consent provided by the examinee on page one authorizes release of copies of this form and supporting documents for this purpose. In the event of an audit, it is possible that the health care provider performing the audit may need to contact the examining health care provider for purposes of clarification. The release provided will permit the examining health care provider to cooperate with the audit process.

Name of Examinee \_\_\_\_\_

Social Security Number \_\_\_\_\_

**E. Medical History (completed by examinee before examination)**

**INSTRUCTIONS:** Please answer all questions accurately and completely. If you do not understand any question, you should request clarification from the examining physician. The information provided regarding your medical history and health habits will be used to make a medical assessment of whether you can safely and effectively perform the essential functions of a public safety position. Detailed medical information will be treated confidentially. It is essential that you answer all questions accurately and completely. Please note that a history of a health problem will be carefully evaluated and will not necessarily disqualify you from employment.

**Do you now have or have you ever had any of the following:** (Circle Yes or No)

1. Fracture of skull, jaw or facial bones	Y	N	40. Stroke, aneurysm or bleeding in head	Y	N
2. Concussion or other injury to head	Y	N	41. Multiple sclerosis or muscular dystrophy	Y	N
3. Thoracic outlet syndrome	Y	N	42. Myasthenia gravis or ALS	Y	N
4. Fracture of neck, vertebrae or spine	Y	N	43. Epilepsy or seizures	Y	N
5. Recurrent back or neck pain	Y	N	44. Dementia or memory loss	Y	N
6. Degenerated or herniated disc	Y	N	45. Migraines or other severe headaches	Y	N
7. Back injury or other abnormality	Y	N	46. Paralysis or muscle weakness	Y	N
8. Back, spine or neck surgery	Y	N	47. Other neurological disorders	Y	N
9. Osteoporosis	Y	N	48. Eczema or other skin disease	Y	N
10. Arthritis or joint injury or disease	Y	N	49. Skin grafts	Y	N
11. Amputation involving hand or foot	Y	N	50. Bleeding disorder/anticoagulation	Y	N
12. Carpal tunnel syndrome	Y	N	51. Sickle cell disease or trait	Y	N
13. Other hand or wrist problems	Y	N	52. Blood clots or thrombosis	Y	N
14. Dislocation of any joint	Y	N	53. High or low blood cell counts	Y	N
15. Injury or abnormality of arms or legs	Y	N	54. Enlarged or ruptured spleen	Y	N
16. Need for corrective lenses	Y	N	55. Diabetes or high blood sugar	Y	N
17. Deficiency of color vision	Y	N	56. Thyroid or other endocrine disorder	Y	N
18. Disease of the eyes or sinuses	Y	N	57. Cancer, malignancy or tumor	Y	N
19. Loss of hearing	Y	N	58. Mental or emotional disorder	Y	N
20. Exposure to loud noise	Y	N	59. Mental health treatment of any type	Y	N
21. Disease of the ear or vertigo	Y	N	60. Lupus, scleroderma, dermatomyositis	Y	N
22. Deformity of mouth or jaw	Y	N	61. Heat stroke, frostbite or burns	Y	N
23. Speech impediment or disorder	Y	N	62. AIDS, HIV infection or hepatitis	Y	N
24. Tuberculosis	Y	N	63. Any history of alcohol or drug abuse	Y	N
25. Pneumothorax or collapsed lung	Y	N	64. Current use of any prescribed drug	Y	N
26. Bronchitis, asthma or other lung disease	Y	N	65. Allergies or chemical sensitivities	Y	N
27. Abnormal electrocardiogram (EKG)	Y	N	66. Occupational (work) injuries	Y	N
28. Heart disease or cardiac abnormality	Y	N	67. Disability or compensation claim	Y	N
29. Irregular heart rhythm	Y	N	68. Asbestos or toxic chemical exposures	Y	N
30. Angina/chest pain/shortness of breath	Y	N	69. Required light or restricted duty	Y	N
31. Hypertension/high blood pressure	Y	N	70. Military rejection or medical discharge	Y	N
32. Organ transplant	Y	N	71. Medical treatment in past 12 months	Y	N
33. Liver, pancreas or gall bladder disease	Y	N	72. CAT Scan, MRI or other special tests	Y	N
34. Ulcer or bowel disease	Y	N	73. Smoked cigarettes or tobacco products	Y	N
35. Intestinal bleeding	Y	N	74. Are you pregnant?	Y	N
36. Hernia of any type	Y	N	75. Any sleep disorder	Y	N
37. Kidney or bladder disease	Y	N	76. Heavy snoring	Y	N
38. Abnormal balance or coordination	Y	N	77. Shortness of breath with light activities	Y	N
39. Fainting, blackouts or dizzy spells	Y	N	78. Other health conditions	Y	N

# \_\_\_\_\_  
 # \_\_\_\_\_  
 # \_\_\_\_\_  
 # \_\_\_\_\_  
 # \_\_\_\_\_

Are you currently receiving any disability benefits? Y N

Please explain "yes" answers by referencing item number.

Provide (in the section to the right of each #) pertinent information relative to diagnosis and treatment for each "yes" response. Include dates for injuries, illnesses and follow up treatments. Please use the back of this page if necessary.

Name of Examinee \_\_\_\_\_ Social Security Number \_\_\_\_\_

## F. Medical Examination

**INSTRUCTIONS:** After reviewing the Medical History provided in Section E, conduct a comprehensive examination of all systems necessary to determine the examinee's fitness under the applicable public safety position Medical Standards. The examination should include, but not be limited to, the areas listed below. If the examiner finds that the examinee has physical examination findings relevant to a determination of whether the examinee will likely be able to safely and effectively perform the essential functions of the position being considered, the examiner is responsible for documenting all such conditions.

Height \_\_\_\_\_ Weight \_\_\_\_\_ Blood Pressure \_\_\_\_\_ / \_\_\_\_\_ Temperature \_\_\_\_\_ Pulse \_\_\_\_\_

### Vision Testing

#### Without Corrective Lenses

#### With Corrective Lenses

Distant Rt. 20/ \_\_\_\_\_ Lt. 20/ \_\_\_\_\_ Both 20/ \_\_\_\_\_ Rt. 20/ \_\_\_\_\_ Lt. 20/ \_\_\_\_\_ Both 20/ \_\_\_\_\_  
Near Rt. 20/ \_\_\_\_\_ Lt. 20/ \_\_\_\_\_ Both 20/ \_\_\_\_\_ Rt. 20/ \_\_\_\_\_ Lt. 20/ \_\_\_\_\_ Both 20/ \_\_\_\_\_

Visual Fields (degrees) Right: Temporal \_\_\_\_\_ Nasal \_\_\_\_\_ Left: Temporal \_\_\_\_\_ Nasal \_\_\_\_\_

Color Vision ☐ Passed ☐ Failed

EXAMINATION	Normal	Abnormal (Identify by number and explain if abnormal)
-------------	--------	---

1. Skin	_____	_____
2. Head, face and scalp	_____	_____
3. Ears, tympanic membranes	_____	_____
4. Eyes, pupils, fundi, motion	_____	_____
5. Nose, sinuses, olfaction	_____	_____
6. Mouth, throat, speech	_____	_____
7. Neck, thyroid	_____	_____
8. Heart	_____	_____
9. Varicosities, bruits, pulses	_____	_____
10. Chest, lungs	_____	_____
11. Breasts (if indicated)	_____	_____
12. Abdomen, hernia	_____	_____
13. Rectum (if indicated)	_____	_____
14. Endocrine	_____	_____
15. Spinal mobility, alignment	_____	_____
16. Upper extremities, hands	_____	_____
17. Lower extremities, feet	_____	_____
18. Muscle strength, tone	_____	_____
19. Gait, Rhomberg	_____	_____
20. Balance, coordination	_____	_____
21. Reflexes	_____	_____
22. Cranial Nerves	_____	_____
23. Mental Status	_____	_____
24. General Appearance	_____	_____

Signature of examining health care provider \_\_\_\_\_ Date \_\_\_\_\_

Print name of examining health care provider \_\_\_\_\_ MD DO NP PAC (circle one)

Name of Examinee \_\_\_\_\_ Social Security Number \_\_\_\_\_

### G. Laboratory and Diagnostic Tests

**INSTRUCTIONS:** Three diagnostic tests are **required** under the Medical Standards. Although not specifically required under the Medical Standards, additional tests may be performed. Some tests **may be required** by the appointing authority or approved by the appointing authority to further evaluate conditions detected on the medical history form and/or during the physical examination. For each test performed indicate below whether the results were **normal** or **abnormal** and document any abnormal results in Section H. **Copies of all laboratory reports should be attached to this form as part of the permanent record.**

#### REQUIRED TESTS:

#### RESULTS

- A. Spirometry\* ☐ Normal ☐ Abnormal  
B. Audiogram\* ☐ Passed ☐ Failed  
C. Purified Protein Derivative (PPD) Test  
or interferon-gamma release assay (IGRA) for tuberculosis\* ☐ Negative ☐ Positive<sup>†</sup>

#### OTHER TESTS:

#### RESULTS

- D. Urine Dipstick\* ☐ Normal ☐ Abnormal \_\_\_\_ Sp. Gravity \_\_\_\_ Protein \_\_\_\_ Sugar  
E. CBC\* ☐ Normal ☐ Abnormal  
F. Chemistry panel\* ☐ Normal ☐ Abnormal  
G. Urine drug screen\* ☐ Negative ☐ Positive  
H. Electrocardiogram\* ☐ Normal ☐ Abnormal  
I. Chest X-Ray\* ☐ Normal ☐ Abnormal  
J. Hepatitis B Immunization\* Dates of Immunizations: #1 \_\_\_\_\_ #2 \_\_\_\_\_ #3 \_\_\_\_\_  
K. Tetanus Immunization\* Dates of Immunizations: \_\_\_\_\_  
L. Other\* \_\_\_\_\_  
\_\_\_\_\_

### H. Additional Notes

**INSTRUCTIONS:** Use this section to summarize any additional medical history information, abnormal physical examination findings, abnormal diagnostic or laboratory test results, and any other relevant information obtained during your evaluation. Please note that sufficient information must be documented so that your decision-making process is clear to any reviewer in the event that the examinee appeals an adverse fitness determination.

In the event that an examinee does not pass the examination, please document in the Medical Verification Section whether **each** disqualifying condition represents a Category A or Category B condition, as defined in the Medical Standards. If Category B, please explain below why you determined that the examinee's condition precluded his or her safe and effective performance of one or more of the essential functions of the public safety position. Additional pages (i.e. transcription notes) may be attached to this form. Also, note Page 7 of this form for reporting any medical conditions that, though not immediately disqualifying, may either need to be assessed through functional performance or that have a medically reasonable chance of progression to a point where they may adversely affect safe and effective performance of the relevant essential job functions.

Signature of examining health care provider \_\_\_\_\_ Date \_\_\_\_\_

Printed name of examining health care provider \_\_\_\_\_ Date \_\_\_\_\_

<sup>1</sup> The candidate should be informed of abnormal results in these evaluations in writing so he/she may consult with his/her primary care physician.

<sup>†</sup> Applicants with newly found positive tuberculosis test results must be evaluated in consultation with a tuberculosis specialist regarding need for treatment and any restriction on participation in activities involving close contact with others.



## I. Medical Verification Section

**INSTRUCTIONS:** Review the medical history, physical examination documentation, diagnostic test results, and laboratory reports in relation to the applicable public safety position Medical Standards and make a determination (regarding) whether the examinee meets all requirements of the Medical Standards. Conditions classified under Category A in the Medical Standards preclude an examinee from work in the public safety position. Conditions listed under Category B in the Medical Standards require careful individual consideration and may require further evaluation to determine whether the condition would preclude this individual from safely and effectively performing the essential functions of the public safety position. If there is uncertainty regarding an examinee's health status or functional abilities which could be resolved with additional information, the examinee should be offered the opportunity to provide medical records, reports from medical specialists, or any other relevant information in order to determine passed or failed status. In this case, the examinee should be advised by the examining physician as to what information is needed for follow up. He or she should be provided with a reasonable, but specific amount of time during which to provide the reports to the examining physician, who will thereafter advise the municipality of the status of the examinee.

*If an examinee fails an initial medical examination, he or she is eligible to undergo a reexamination within 16 weeks of the date of the failure of the initial examination. If the examinee opts for a reexamination, he or she must arrange it with the municipal authority.*

**NOTE:** In cases where the medical examination has been performed by a nurse practitioner or physician's assistant, a doctor of medicine or osteopathy must sign this Medical Verification Section.

When all necessary information has been received and reviewed, complete this Medical Verification Section and distribute per instructions below. Medical examination records are the property of the municipal authority. They must be kept accessible for the duration of the examining physician's contract for use in the event of an audit, appeal or disability proceeding. If the contract terminates or expires, the physician will be instructed to transfer these records to his or her successor. The physician, however, may retain copies of his or her own examination reports and selected materials.

Name of Physician \_\_\_\_\_

Address of Physician \_\_\_\_\_ Telephone \_\_\_\_\_

Date of Medical Examination: \_\_\_\_\_ for Fire Department ☐ Police Department ☐

Physician Email: \_\_\_\_\_

### PHYSICIAN'S CERTIFICATION OF FITNESS

I have reviewed the medical examination for the following examinee using the Human Resources Division's Medical Standards Program for Public Safety Personnel:

☐ Initial Exam ☐ Other Exam (Please explain) \_\_\_\_\_

Name of Examinee: \_\_\_\_\_ Social Security #: \_\_\_\_\_

Home Address: \_\_\_\_\_

Home Telephone: \_\_\_\_\_

Physician must certify whether candidate passed or failed the medical exam:

☐ I hereby certify that the above named examinee passed the medical examination.

or

☐ I hereby certify that the above named examinee failed the medical examination.

Section Failed \_\_\_\_\_

Category A ☐ Category B ☐

Section Failed \_\_\_\_\_

Category A ☐ Category B ☐

Section Failed \_\_\_\_\_

Category A ☐ Category B ☐

*PHYSICIAN'S NOTICE OF EXAMINEE'S FAILURE TO PROVIDE COMPLETE & ACCURATE MEDICAL HISTORY (See Privacy Notice on Page 1 of this form and please provide comments below and attach documents if necessary.)*

\_\_\_\_\_  
Physician Signature: \_\_\_\_\_ Date: \_\_\_\_\_ License # \_\_\_\_\_

Print Physician Name: \_\_\_\_\_ MD DO (circle one)

The Medical Verification Section must be returned to the Appointing Authority. The Appointing Authority will forward the Medical Verification Section, along with a signed copy of page one of this Medical Examination Form to the Human Resources Division (HRD). These Sections may be e-mailed to [PAT@state.ma.us](mailto:PAT@state.ma.us), or mailed to the Commonwealth of Massachusetts, Human Resources Division, Civil Service Unit, One Ashburton Place, Room 301, Boston, MA 02108.

### **CATEGORY B MEDICAL ALERT FORM**

**INSTRUCTIONS:** The purpose of this form is to ensure that a passing examinee with one or more Category B conditions which do not result in a failure, but do represent a potential future risk to the examinee in terms of his/her future health and ability to safely perform the duties of a police officer/fire fighter based on the existing medical understanding of the progression of the condition, is notified of the condition(s) and the recommendation to monitor the condition(s) on a regular basis. In addition, given the inherent risk to the individual and others while serving in a public safety position, the same information will be provided to the appointing authority. It is the responsibility of the examining physician to determine when it is appropriate to use this form, to ensure that the form is completed properly, and to inform the examinee in person and the appointing authority by phone or mail. [NOTE: Upon request, the examinee can be provided with a copy of this form.]

Date of Examination: \_\_\_\_\_

Name of Examinee (Printed): \_\_\_\_\_

Name of Physician (Printed): \_\_\_\_\_

#### *Completed by the Physician*

**LISTING OF CATEGORY B CONDITION(S)** (such as diabetes, disease of the eye, etc.) **THAT REPRESENT A POTENTIAL RISK TO THE EXAMINEE:** Be specific regarding each condition and the current status as of the examination date listed above.

#### *Completed by the Examinee Immediately after Presentation by the Examining Physician*

#### **ACKNOWLEDGEMENT OF RECEIPT OF SUPPLEMENTAL MEDICAL INFORMATION:**

The examining physician presented and explained the medical condition(s) listed above. By signing this form, I acknowledge that:

- I asked questions of the examining physician to ensure I understood the medical condition(s) at least at a basic level that would enable me to discuss the issues with my personal physician.
- I understand that the condition(s) does not disqualify me from being hired as a police officer/fire fighter.
- I understand that it is the recommendation of the examining physician that I discuss the condition(s) with my personal physician and develop an ongoing plan for monitoring my condition since it is likely to progress at some point in the future and it is impossible to predict how quickly or slowly that change may take place.
- I understand that given the inherent risks to myself, other members of the department, and the public while performing the duties associated with a police officer/fire fighter, the same information will be shared with the appointing authority.
- I acknowledge and give my permission for the physician to release my personal medical information specific to the condition(s) listed above ONLY to the appointing authority.

My Name (Printed): \_\_\_\_\_ Today's Date: \_\_\_\_\_

My Signature: \_\_\_\_\_

#### *Completed by the Physician*

#### **PERFORMANCE OF RESPONSIBILITIES:**

I acknowledge informing the examinee of the potential risks listed above on the date listed on this form.

I also informed the appointing authority of the existing conditions for this individual and recommendation for ongoing monitoring of the individual through: (check one)

☐ a formal letter (attached)

☐ an e-mail (printed and attached)

Signature of Physician: \_\_\_\_\_

## **Appendix C: Medical Examination Appeal Process**

## **Commonwealth of Massachusetts Police Officer/Firefighter Candidate Medical Appeal Process**

**IMPLICATIONS FOR ANY MEDICAL APPEAL/RE-EXAMINATION:** The outcome of the re-examination will take precedence over the outcome of the initial examination in determining whether a candidate meets the initial hire medical standards.

**TIMEFRAME FOR MEDICAL APPEAL:** If a candidate fails his/her initial medical examination, s/he is eligible to complete re-examination within 16 weeks of the date of the failure. This 16-week period applies even if multiple follow-up examinations are required for a candidate who fails multiple areas of the medical standards. The appeal period will not be extended beyond 16 weeks. Inability to complete the appeal within the 16-week appeal period will result in failure of the medical standards and the appointment being rescinded. Given the sequence of events which must take place to complete one or more re-examinations, any candidate interested in completing an appeal must formally initiate the appeal process by notifying the Appointing Authority ("AA") no later than 30 days after the initial failure.

**APPROVAL OF PHYSICIAN(S) FOR RE-EXAMINATION(S):** Any re-examinations must be conducted by a physician approved by the AA. Accordingly, the candidate must work with the AA to arrange the re-examination. When arranging any re-examinations, the AA should clearly inform the candidate that a second failure will result in the appointment being rescinded.

**SELECTION OF THE RE-EXAMINATION PHYSICIAN(S):** Any re-examination will focus on the particular standard(s) not met by the candidate in the initial examination and should entail examination by a Board certified specialist in the appropriate specialty. Initial failures that involve procedural issues (e.g., laboratory or diagnostic test not completed) may not necessarily require re-examination by a specialist but the procedural issue in question should be addressed during the re-examination. In either case, the physician doing the re-examination must be different than the physician who completed the initial examination.

**COSTS OF MEDICAL EXAMINATIONS:** For all medical examinations and re-examinations, the AA will clearly inform the candidate from the start whether the costs associated with such examination are to be paid for by the AA or the individual.

**PRIOR TO PERFORMANCE OF THE RE-EXAMINATION:** Any physician/specialist selected to perform a re-examination must consult with HRD's medical consultant prior to conducting the re-examination to ensure that the physician/specialist understands the focus of the follow-up examination and gives proper consideration to the essential functions of the relevant position. Prior to issuing a determination, the physician/specialist is encouraged to contact HRD's medical consultant for a follow-up discussion as needed to discuss any aspect of the re-examination process.

**FALSE OR INCOMPLETE INFORMATION PROVIDED BY CANDIDATE:** The Medical Examination Form clearly states that knowingly providing false or incomplete answers may be a basis for rescission of the appointment or dismissal if discovered at a later time. It is the AA's decision whether to rescind an offer or dismiss an employee on this basis. Examining physicians should not rely on this to conclude that a candidate has failed the medical examination. The examining physician's determination should be based on the candidate's presenting medical condition. However, the examining physician is required to notify the AA when s/he concludes that the candidate knowingly provided false or incomplete answers given the candidate's medical history and/or current medical condition.